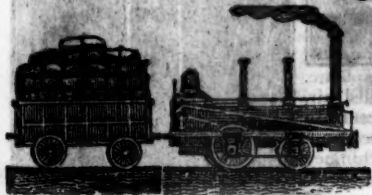


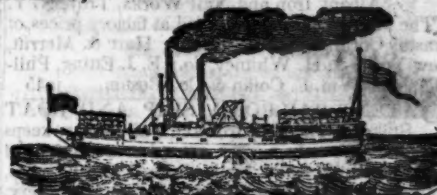
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,
AND MINES.



ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 23 CHAMBERS STREET, NEW YORK, AT FIVE DOLLARS PER ANNUM.

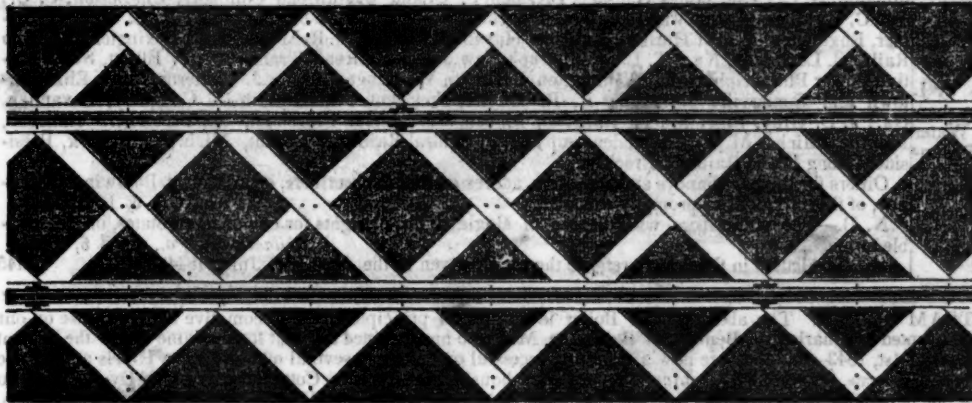
SECOND QUARTO SERIES, VOL. II., No. 2.]

SATURDAY, JANUARY 10, 1846.

[WHOLE No. 498, VOL. XIX.]

W. R. CASEY, CIVIL ENGINEER, NO. 23 Chambers street, New York, will make surveys estimates of cost and reports for railways, canals, roads, docks, wharves, dams and bridges of every description. He will also act as agent for the sale of machinery, and of patent rights for improvements to public works.

HERRON'S PATENT AMERICAN RAILWAY TRACK,



As seen stripped of the top ballasting.

HERRON'S IMPROVEMENTS IN RAILWAY Superstructure effect a large aggregate saving in the working expenses, and maintenance of railways, compared with the best tracks in use. This saving is effected—1st, Directly by the amount of the increased load that will be hauled by a locomotive, owing to the superior evenness of surface, of line and of joint. This gain alone may amount to 20 per cent. on the usual load of an engine.—2d, In consequence of the thorough combination, bracing, and large bearing surface of this track, it will be maintained in a better condition than any other track in use, at about one-third the expense.—3d, As action and reaction are equal, a corresponding saving of about two-thirds will be effected in the wear and tear of the engines and cars, by the even surface and elastic structure of the track.—4th, The great security to life, and less liability to accident or damage, should the engine or cars be thrown off the rails.—5th, The absence of jar and vibration, that shake down retaining walls, embankments and bridges.—6th, The great advantage of the high speed that may be safely attained, with ease of motion, reduction of noise, and consequently increased comfort to the traveller.—7th, The really permanent and perfect character of the Way, insuring regularity of transit. To which may be added the great increase of travel, that would be induced by the foregoing qualities to augment the revenue of the railroad.

The cost of the Patent track will depend on the quantity and cost of iron and other materials; but it will not exceed, even including the preservation of the timber, the average cost of the tracks on our principal railroads. Generally, the timber structure, fastenings and workmanship, exclusive of the cost of the iron rails, will be from \$2,300 to \$4,000 per mile. On this structure, rails of from 40 to 50 lbs. per yard, will be equal in effect to

60 and 70 lbs. rails laid in the usual way. The proprietors of a road, furnishing approved materials in the first instance, the undersigned will construct the track on his plan in the most perfect manner, with recent improvements, for one thousand dollars per mile. And he will farther contract to maintain said track for the period of ten years, furnishing such preserved timber and iron fastenings as may be required, and keeping said track in perfect adjustment, under any trade not exceeding 100,000 tons per annum, or its equivalent in passenger transportation, for Two hundred dollars per mile per annum. To insure the faithful performance of this contract, he will pledge one-fourth of the cost of construction, with the accruing interest thereon, regularly vested, until the completion of the contract. So that a company, by securing payment to the undersigned at the specified period, will have only \$750 per mile to pay for the workmanship on the track, without any charge being made for the use of the patent, the subsequent payments, for maintenance of way, and amount withheld, being made from the large margin of profits that will result from its use.

JAMES HERRON,

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia.

* A general average of the repairs done on six of the most successful railroads in this country, for a period of from six to eight years' use has been found to exceed \$625 per mile per annum, exclusive of renewal of rails. But few roads in this country carry as much as 100,000 tons per annum. When a road exceeds that quantity, the repairs due to the additional tonnage, up to 200,000 tons, will be charged at one mill per ton; over the latter, and not exceeding 300,000 tons, nine-tenths of a mill, etc. Where there are two tracks to maintain, a large reduction upon those rates will be made.

THE AMERICAN RAILROAD JOURNAL is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
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One page, single insertion.....	8 00
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Professional notices per annum....	5 00

ENGINEERS and MACHINISTS.

J. F. WINSLOW, Albany Iron and Nail Works, Troy, N. Y. (See Adv.)
TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)
ROGERS, KETCHUM and GROSVENOR, Patterson, N. J. (See Adv.)
S. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)
NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)
KITE'S Patent Safety Beam. (See Adv.)
FRENCH & BAIRD, Philadelphia, Pa. (See Adv.)
NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)
ROSS WINANS, Baltimore, Md.
CYRUS ALGER & Co., South Boston Iron Company.
SETH ADAMS, Engineer, South Boston.
STILLMAN, ALLEN & Co., N. Y.
JAS. P. ALLAIRE, N. Y.
H. R. DUNHAM & Co., N. Y.
WEST POINT FOUNDRY, N. Y.
PHOENIX FOUNDRY, N. Y.
R. HOE & Co., N. Y.
ANDREW MENEELY, West Troy.
JOHN F. STARR, Philadelphia, Pa.
MERRICK & TOWNE, do.
HINCKLEY & DRURY, Boston.
C. C. ALGER, Stockbridge Iron Works, Stockbridge, Mass.
BALDWIN & WHITNEY, Philadelphia, Pa.
THOMAS & EDMUND GEORGE, Philadelphia. (See Adv.)

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y. The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Eting, Philadelphia; Wm. E. Coffin & Co., Boston. ja45

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45

FRENCH AND BAIRD'S PATENT SPARK ARRESTER

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

E. A. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading, and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Supt Hartford and New Haven Railroad; W. R. McKee, Supt Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Supt New Jersey Railroad Trans. Co.; J. Elliott, Supt Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Supt Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Supt Macon Railroad, Macon, Ga.; J. H. Cleveland, Supt Southern Railroad, Monroe, Mich.; M. F. Chittenden, Supt M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, or to Messrs. Baldwin & Whitney, of this city, will be promptly executed.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

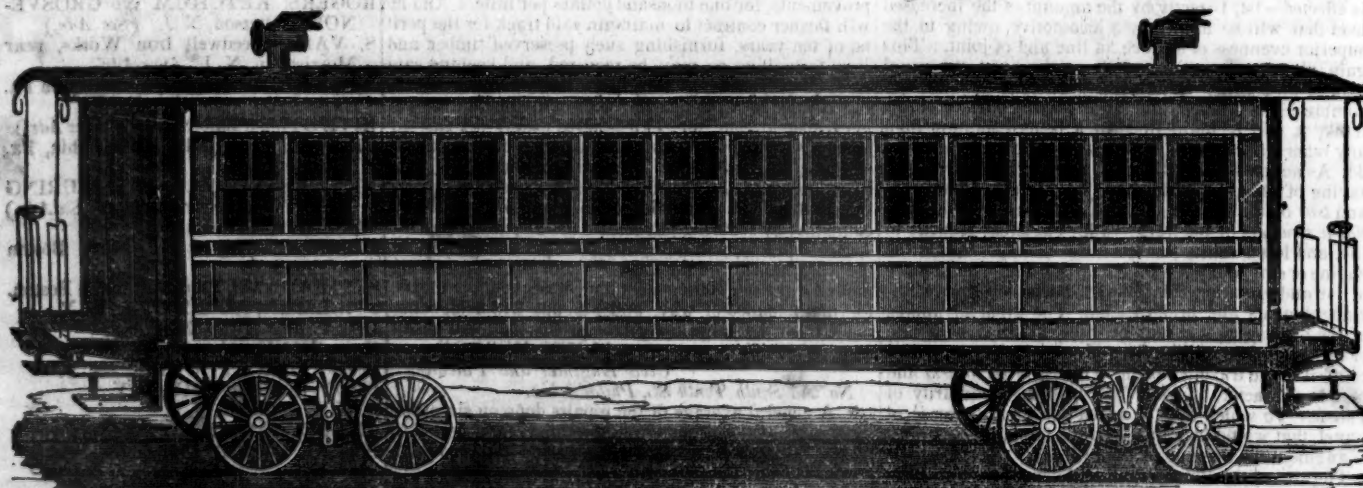
Philadelphia, Pa., April 6, 1844.

*** The letters in the figures refer to the article given in the Journal of June, 1844.

ja45

BENTLEY'S PATENT TUBULAR STEAM BOILER. The above named Boiler is similar in principle to the Locomotive boilers in use on our Railroads. This particular method was invented by Charles W. Bentley, of Baltimore, Md., who has obtained a patent for the same from the Patent Office of the United States, under date of September 1st, 1843—and they are now already in successful operation in several of our larger Hotels and Public Institutions, Colleges, Alms Houses, Hospitals and Prisons, for cooking, washing, etc.; for Bath houses, Hatters, Silk, Cotton and Woollen Dyers, Morocco dressers, Soap boilers, Tallow chandlers, Pork butchers, Glue makers, Sugar refiners, Farmers, Distillers, Cotton and Woollen mills, Warming Buildings, and for Propelling Power, etc., etc.; and thus far have given the most entire satisfaction, may be had of D. K. MINOR, 23 Chambers st. New York.

DAVENPORT & BRIDGES' CAR WORKS.



DAVENPORT & BRIDGES CONTINUE TO MANUFACTURE TO ORDER, AT THEIR WORKS, IN CAMBRIDGEPORT, MASS. Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern, and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All order punctually executed and forwarded to any part of the country. Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.

RAILROAD IRON AND LOCOMOTIVE
 Tyres imported to order and constantly on hand
 by **A. & G. RALSTON**
 Mar. 20th 4 South Front St., Philadelphia.

THE NEWCASTLE MANUFACTURING
 Company continue to furnish at the Works, situated in the town of Newcastle, Del. Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.
ANDREW C. GRAY,
 President of the Newcastle Manuf. Co.

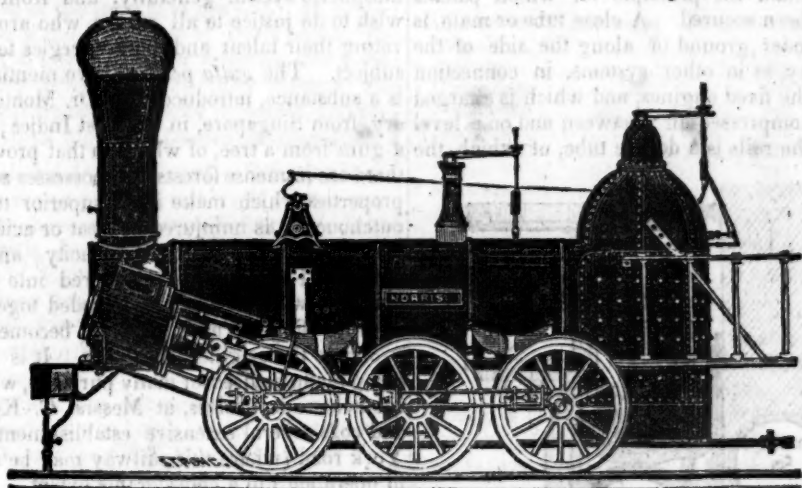
CUSHMAN'S COMPOUND IRON RAILS.
 etc. The Subscriber having made important improvements in the construction of rails, mode of guarding against accidents from insecure joints, etc.—respectfully offers to dispose of Company, State Rights, etc., under the privileges of letters patent to Railroad Companies, Iron Founders, and others interested in the works to which the same relate. Companies reconstructing their tracks now have an opportunity of improving their roads on terms very advantageous to the varied interests connected with their construction and operation; roads having in use flat bar rails are particularly interested, as such are permanently available by the plan.

W. Mc. C. CUSHMAN, Civil Engineer,
 Albany, N. Y.

Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applications must be post paid.

NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class 1, 15 inches Diameter of Cylinder, x 20 inches Stroke.

" 2, 14 "	" " "	" x 24 "
" 3, 14 "	" " "	" x 20 "
" 4, 12 "	" " "	" x 20 "
" 5, 11 "	" " "	" x 20 "
" 6, 10 "	" " "	" x 18 "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Corks, T, L, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER PLANS.



Manufactured and for sale by

MORRIS, TASKER & MORRIS.
 Warehouse S. E. Corner of Third & Walnut Streets,
 PHILADELPHIA.

RAILROAD IRON.—THE MARYLAND AND NEW YORK IRON AND Coal Company are now prepared to make contracts for Rails of all kinds. Address the Subscriber, at Jennon's Run, Alleghany County, Maryland.

WILLIAM YOUNG,
 President.

TO IRON MASTERS.—FOR SALE.—MILL SITES in the immediate neighborhood of **Bituminous Coal and Iron Ore**, of the first quality, at Ralston, Lyoming Co., Pa. This is the nearest point to tide water where such coal and ore are found together, and the communication is complete with Philadelphia and Baltimore by canals and railways. The interest on the cost of water power and lot is all that will be required for many years the coal will not cost more than \$1 to \$1 25 at the mill sites, without any trouble on the part of the manufacturer; rich iron ore may be laid down still more cheaply at the works; and, taken together these sites offer remarkable advantages to practical manufacturers with small capital. For pamphlets, descriptive of the property, and further information, apply to Archibald McIntyre, Albany, to Archibald Robertson, Philadelphia, or to the undersigned, at No. 23 Chambers street, New York, where may be seen specimens of the coal and ore.

W. R. CASEY, Civil Engineer,

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 feet, with lathes, work benches, &c.

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45 feet two stories high, with a shed part 45x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to **HENRY ANDREWS, 49 State st.,** or to **CURTIS, LEAVENS & CO., 106 State st., Boston,** or to **A. & G. RALSTON & Co., Philadelphia.**

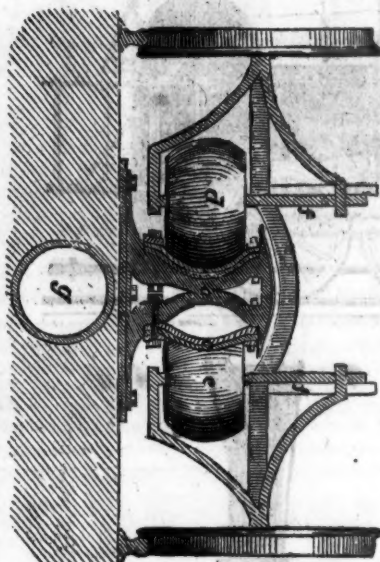
CYRUS ALGER & CO., South Boston Iron Company.

Mr. Hudson's Railway Policy.—There is so much of truth, and justice, and good liberal sense in Mr. Hudson's policy that we cannot refrain from adding our testimony to that of the able editor of the Railway Chronicle in the following paragraph in its favor, and to say that we hope others may profit by it. We have marked Mr. Hudson's address, on taking his seat at the board of the Eastern Counties' from which we shall make some extracts if we can spare room for them.

Mr. Hudson's speech at the Eastern Counties realizes all the hopes we held out to the shareholders, when we earnestly advocated his elevation to his present commanding position as chairman of a continuous group of lines extending nearly from the centre of Scotland to the heart of London! We will not do his speech the injury of garbled extracts, nor will we load it with eulogy. We simply recommend its perusal to our readers as a fair epitome of the principles of the Hudson policy. "Benefit the public, and you benefit yourselves," "Promote your own interests, but carry with you the interests of all whom it affects." "Do good to yourselves, but take others along with you in your prosperity, instead of thriving at their expense." This, which we have uniformly advocated as the do-as-you-would-be-done-unto policy, is Mr. Hudson's; and it is the secret of his success. So long as he adheres to it he deserves prosperity and the praise of all good men.

Nickel's System of Atmospheric Propulsion on Railways.—Great as has been the advance of science during the past fifty years, and much as it has tended to the altered condition and habits of society, daily experience would lead us to believe—what is, indeed, by many broadly asserted—"that we are yet only in our infancy;" that although the immutable laws of nature may be generally understood, and the power which they offer for the use of man known, still that they are most erroneously applied, at enormous loss, expense, and danger, where all should be harmony, economy, and safety. To our present railway system these observations most particularly apply; the first application of wooden rails in coal districts, for facilitating the horse's draught with his heavy burden, led to the development of the system to supersede the common roads. The invention of the locomotive engine, the most ingenious and splendid application of steam power since the days of Watt, and which will equally immortalize its inventor, succeeded; and, improvement on improvement followed, until at the present day, after a lapse of only fifteen years, sixty or seventy miles per hour has been accomplished—while, in the early stages of its history, it was boldly laid down by some engineers that it could never reach twenty; but, with all its promising advantages, it was soon discovered that enormous expense and danger were its characteristics. Other systems of propulsion were sought for, the power of the atmosphere was applied, and fully carried

out, and numerous inventions, consisting of the use of both compressed and rarified air, have since been patented in nearly every kingdom and state both in the old and new worlds. Among these is the one under notice, having neither longitudinal valve—or racks, wheels, or pinions—and which for safety, economy, absence of friction, and power, would appear to stand second to none. Leakage is impossible, except from accident to the tube. The principle strikes us as being a truly Archimedean one. In mechanics, it is well understood that a screw is only the wedge in another form; and here, the compressed air acting on the leader of a train, in the form of the wedge, we are presented with a beautiful illustration of that enormous power which Archimedes so successfully and so miraculously wielded. We will now endeavor to explain the principle for which patents have been secured. A close tube or main, is laid under ground or along the side of the railway, as in other systems, in connection with the fixed engines, and which is charged with compressed air; between and on a level with the rails is a double tube, of which the



following is a section and description:—*a*, is a strong iron flange, cast in lengths, jointed and continued throughout the line, forming the inside of each tube; *b*, and *c*, are diaphragms, composed of layers of leather, strong canvass, and gutta percha—a newly discovered substance, possessing properties superior to caoutchouc—and a description of which we gave in our account of the distribution of prizes, by Prince Albert, at the society of Arts, in June last—and which form the outer side of the tubes, which, when inflated, are elliptical in section; *d*, *e*, are smooth wheels or pinions turning on the perpendicular axes *f*, *f*, between the wheels, and strongly attached to the driving carriage by suitable frame work. It will now be seen, that while these tubes remain empty, the wheels, *d*, *e*, will press the diaphragms against the flanges, as at *b*, and remain at rest; but, on opening the valve in connection with the reservoir tube before mentioned, the tubes behind the carriage become inflated as at *c*, which wedging against the wheels, forces the

train along with enormous power and velocity. One great advantage of this system appears to be, that the most accurate knowledge of the power at command is always possessed; the reservoir tube, being once charged to any number of atmospheres required, and the proportion between that and the elastic driving tubes accurately known, the power at command is at once discovered, in proportion to the trains, as no leakage, no loss, can take place, and carriages can start every five minutes. Another, and the most paramount advantage, is, its perfect safety; the wheels running firmly against, and even in, the elliptic flanges, makes it next to impossible to run off the rails, and collisions can never happen.—We have thus been particular in describing this ingenious but simple mode of propulsion, from the advocacy we have adopted of the atmospheric system generally, and from our wish to do justice to all parties who are devoting their talent and their energies to the subject. The *gutta percha* above mentioned is a substance, introduced by Dr. Montgomery, from Singapore, in the East Indies; it is a gum from a tree, of which in that province there are immense forests. It possesses many properties which make it far superior to caoutchouc; it is uninjured by heat or acids, is elastic, but possesses more tenacity; and at 212 deg. Fah. can be mouldered into any form, or two pieces can be kneaded together with the fingers, and the joint becomes as strong as the original substance. It is now being manufactured for many purposes, where caoutchouc is useless, at Messrs. C. Keene and co.'s several extensive establishments in York road (where this railway may be seen in operation,) to a considerable extent.

Gutta Percha.—In our notice of Messrs. Nickell and Keene's improvements on the atmospheric railway system, we alluded to a new substance introduced by them for the valves. Having had several inquiries respecting its peculiar properties, we subjoin the following particulars: *Gutta Percha* (from Singapore) was introduced last year by Dr. Montgomery, E. I. C., for which he received the medal of the society of Arts. In many respects it resembles india rubber; is obtained from certain trees, from which it exudes at all times of the year. It is soluble in turpentine, and forms with it a kind of varnish, but peels off from metals. At the temperature of the atmosphere, it is hard, and only slightly elastic, but at boiling water heat it softens, and becomes pulpy, and may readily be mouldered into any form, which it retains when cold. It is unaffected by acids and chemical re-agents generally, and is not altered by exposure to damp or atmospheric changes. It may be formed into threads, and cloth woven from it; and, to prepare the threads, it is only necessary to heat it, and press it through plates with small holes, when it passes out in a vermicelli form, of whatever shape the hole is, but in this state it is not very strong. Cloth woven from it, and mixed with flaxen thread, is exceedingly strong. In many cases it will advantageously supply the place of leather.—*London Mining Journal.*

The Price of Iron in France.—The price of iron is on the rise at Paris in a progressive manner. The iron of Champagne, called "half rock," made by coal, is worth 400fr., or 16 $\frac{1}{2}$ the 1000kil. The drawn and flattened iron of Chatillonnais has been firm at 15 $\frac{1}{2}$ 8s. In consequence of a meeting held by the principal iron merchants of Paris, it is the intention of carrying the price to 16 $\frac{1}{2}$. Some houses, who have a few good samples, the assortment of which is generally wanting in Paris, keep their prices very firm. The flattening forges in the environs of Paris are in too full work either to replace the supplies which are wanting, in consequence of the interruption of the arrivals, or for re-passing under the cylinders any considerable quantity of the iron from Aveyron, of old make, so as to improve it, and convert it into the current samples of the market in general. In consequence of the carpenters of Paris having returned to full work, after entering into a satisfactory agreement with their masters, the iron nail trade has rapidly increased, and prices become higher.—*London Mining Jour.*

Coal and Iron in Egypt.—Referring to an article in our paper of last week on this subject, we have since learned that Mr. John Petherick, Jun., who was despatched by the pacha of Egypt some months since to Sinai and Stony Arabia, and from thence to Nubia, by way of Petra and Mecca, in search of coal, has, much to his dissatisfaction, been obliged to return to Cairo, when within three day's journey of Petra, in consequence of the tribes of Allouin Arabs being at war with each other. On one occasion, he found himself suddenly in a battle-field, hotly contested by two adverse tribes, and it was only by joining the defeated party, with his escort, that they were preserved from being entirely despoiled of all their effects and camels, and probably left to perish in the desert. In Stony Arabia, and as far as he could penetrate, there is not the slightest indication of coal formations. His next route is Upper Egypt.—*London Mining Journal.*

Prosperity of the Iron Trade.—The business at the Dowlais Iron Works has so increased, that two new blast furnaces are to be blown in immediately, and an advance of two pence per ton is to be given to the ballers; the old furnaces, which were out of blast, have all been thoroughly repaired, and are now ready for blowing in. The weight of the sledge hammers used by the men at the iron works is very little known; they are from 84 lbs. to 87 lbs. weight, and half of our strong able-bodied agricultural laborers could scarce lift, much less strike with them a true and efficient blow: this, however, more the result of practice than any extraordinary strength in the men.

Great Western Railway.—It is stated that the dividend for the next half year will be 4 $\frac{1}{2}$ per cent., or after the rate of 9 per cent. per annum. The increase of receipts from the week ending July 6, to the 23d, November, is nearly 40,000 $\frac{1}{2}$ over the corresponding period of last year. The estimated increase for the next five weeks over the corresponding

period of the last half year, is put down at 10,000 $\frac{1}{2}$. The gross increase therefore, will be 50,000 $\frac{1}{2}$ upon the half year. The dividend required to be paid on the additional call of 5 $\frac{1}{2}$ on the old shares, and 2 $\frac{1}{2}$ 10s. on the new quarter shares (for it is understood a dividend will be declared upon the latter at the next half-yearly meeting,) will absorb 14,625 $\frac{1}{2}$, leaving 35,375 $\frac{1}{2}$ unappropriated—and, therefore, applicable to the increased dividend alluded to. It should be observed that there has to be deducted from the increased receipts the increased expense consequent upon the opening of the line to Gloucester. The extent of this new portion of the Great Western railway is, however, twelve miles only, and the working expenses incurred upon it can take but little from the increased receipts of 50,000 $\frac{1}{2}$ upon the half-year.

Distances on the Mississippi. From Pittsburg.

To Wheeling.....	91 miles.
" Marietta.....	172 "
" Guyandotte.....	298 "
" Portsmouth.....	346 "
" Maysville.....	392 "
" Cincinnati.....	449 "
" Louisville.....	581 "
" Shawneetown.....	830 "
" Mouth of Ohio.....	970 "
" Memphis.....	1184 "
" Natchez.....	1743 "
" New Orleans.....	2047 "

Vermont Central Railroad.—The Vermont Central railroad has been located from Windsor, which is some miles (14 we believe,) below the mouth of White river. This, therefore, is to be added to our paragraph of last week. A further investigation, we also learn, is to be made of the gulf route, through Williamstown, by the engineers.

The directors, we learn, have concluded a contract for the grading and masonry of the whole road, from Windsor to the lake, with Messrs. S. F. Belknap and co., and the work will be forwarded with as much despatch as practicable.—*Bunker Hill Aurora.*

The Rutland people appear to be looking in a new direction for a railroad communication with our city:

A meeting of the citizens of Rutland and vicinity was held at the Town hall, in Rutland, on Thursday, Nov. 13, in favor of the construction through that town of the proposed Worcester and Greenfield railroad. A committee was appointed to take the necessary measures to secure that object.—*Bunker Hill Aurora.*

The Boulogne and Amiens.—At the Boulogne and Amiens meeting it was stated that the receipts amounted to 12,706,952f. (608,277 $\frac{1}{2}$.) and the expenditure to 807,166f. (32,365 $\frac{1}{2}$.) leaving a balance of 11,897,789f. (475,911 $\frac{1}{2}$.) 4 per cent. was to be paid to the shareholders till the opening of the line, which is expected to take place by the spring of 1847.

Michigan Railroad.—We have two railroads in operation. The Central, now in operation to Battle creek, will in a few weeks be continued to Kalamazoo, 140 miles in length, and the Southern railroad which is in operation to Hillsdale, about 67 miles.

An Abstract of the Blast Furnaces, with Amount of Produce in Great Britain.

Counties.	Total fur.	In blast.	Out. pt. week.	Produce yearly.
Staffordshire.....	108	81	27	3503 171,735
Derbyshire.....	19	14	5	436 19,184
Yorkshire.....	34	22	12	752 35,308
Scotland.....	25	17	8	645 29,200
South Wales.....	109	81	27	4461 223,520
Shropshire.....	49	36	13	1723 86,320
North Wales.....	14	8	6	303 13,100
Cumberland.....	4	—	—	—
Gloucestershire.....	3	—	—	—
Durham.....	2	—	—	—
Lancashire.....	4	—	—	—
Leicestershire.....	1	—	—	—
Ireland.....	2	2	—	60 3,000

Total.....374 261 103 11,883 581,376

* No returns from four furnaces. † No returns from Cumberland, Gloucestershire or Durham.—*London Mining Journal.*

The legislature of Tennessee have passed a bill for the construction of a railroad from Nashville to Chattanooga. A railroad is already constructed from the Atlantic seaboard in Georgia to Cross Plains, from which place to Chattanooga the distance is only 35 miles.

Freight of the Western Railroad.—A communication in the Pittsfield Sun, states that there passed the station at that place, during the month of November, 3163 freight cars, all loaded at Albany and intermediate stations, for stations east of that, containing 12,650 tons of merchandize, and requiring 150 engines to train the same; averaging 420 tons daily, and for each engine 84 tons, independent of nearly the same weight of cars.—*Springfield Republican.*

French Academy of Sciences.—Sitting of November 24.—M. Arago read a long communication from E. Boucherie on the preservation of wood for building and other purposes. It is now four years since M. Boucherie communicated to the academy a series of experiments, proving that he had discovered a cheap means of forcing into the pores of wood liquids capable of giving it great durability and entirely new properties. Since that time many patents have been taken out in France and England for different modes of preserving wood, and each discovery has been proclaimed as infallible, as Kyan's process was thought to be for a time. Of all these discoveries, however, one only has been practically worked to any extent, viz: Payne's process, which consists in forcing out the air and juices of the wood by an exhausting pump, and supplying the vacuum by a mixture of iron and lime. As to M. Boucherie the public, although thankful to him for the activity with which he had demonstrated his theory by experiments, had begun to infer that he had (in the presence of Payne's process, a patent for which has been taken in France by Mr. Banner, who is at this moment forming a company for working it on a large scale) abandoned all idea of turning his discoveries to a practical account. It would appear, however, from the present communication to the academy, that M. Boucherie has not been idle.—He has on the contrary, been continuing his experiments, and submitting them to the test of time, in order that any objections which might be offered should be replied to by facts. In November, 1842, one hundred pieces of

wood of different kinds of the length and size used for railroad sleepers, were prepared by M. Boucherie. It is known to all persons who read the account given at the time of M. Boucherie's process, when he presented his first paper to the academy, that it consists in the introduction of solutions by a sort of filtration. A tub containing the liquid is placed in contact with one end of the wood; the pressure produced by raising the level of the liquid a little above that of the wood suffices for its perfect impregnation, with the exception of the central part or heart. Some of these pieces of wood were left in their natural state; others were impregnated to only half their length, and others in the entire length. The liquids used were pyroligneous acid, sulphate of copper, chlorurate of sodium and mercury. The wood was buried in the ground, at the depth of a few centimetres, in an enclosed yard at Compiègne, where it remained nearly three years. On taking it up recently, the prepared wood was found perfectly sound, and that which had not been prepared entirely rotten. As the process of preparation, interment, and disinterment was performed in the presence of the authorities of Compiègne, who have given a certificate to the effect stated by M. Boucherie, no doubt can be entertained as to the results obtained. M. Boucherie's mode of preserving wood is not very expensive, and it is attended with this great advantage; the cheaper sorts of timber, which are never used in their natural state for railroads or building purposes on account of their want of durability, may, he says, be used with a much better effect, when thus prepared, than the dearest timber in its natural state, and thus, even after deducting the cost of the process of preservation, the saving is very great. We confess, however that we are by no means convinced as yet that M. Boucherie's process, which is in fact but a modification of that of Kyan, Marjery, and others, is the best. Within the last few days we have seen in the journals a paragraph stating that the directors of the Paris and Rouen railroad have been compelled to take up, in consequence of decay, some of the sleepers which had been prepared by the introduction of metallic salts. The mode of impregnation may not have been the same as that of M. Boucherie, but the results must be nearly the same. Payne's process is essentially different. He places the wood to be prepared in a receiver, where the air and juices are driven out by exhaustion, and the cavities are then filled up with a material that is comparatively indestructible. The cost of the operation must, besides, be quite as small if not smaller than with the process of M. Boucherie.

Congress of Engineers and Manufacturers in France.—We perceive by the *Montieur Industriel* that several of the most eminent engineers and manufacturers have formed the project of holding a congress, or general meeting, of the leading scientific men throughout France, for the purpose of discussing the improvements that may be made in mining operations, machinery, manufactures, and the

general interest of the country, which will be represented by their respective members. The provisional committee has not yet been entirely formed; but every day there are new accessions of the most scientific men who are sending in their adhesion and strong approval of the formation of an association which may render such eminent services to every branch of industry, unconnected with any political feeling or danger to the state. As soon as the list is complete, it will be then decided by a council when the first congress shall be held. In the mean time many names of distinction have been put down as members of the provisional committee; among which figure several peers of the realm, extensive holders of mines, forges, the constructing of machinery, and many other perfections in the metallic, as well as the manufacturing industry of the different departments. It is expected that this will be one of the best attended of any association that has ever been projected or established in Paris, or any other part of France, being purely of a scientific nature, confined to the improvement of the resources of the country now that such a rapid progress is making in every branch of national industry in England, Belgium and Germany.

Iron Trade.—Notwithstanding the increased consumption of iron which must arise from the carrying out our numerous railways, as well as fulfilling export orders, there has been, during the past week, a tendency to a decline wholly unaccountable; in Scotland particularly makers have been more inclined to sell, and some thousands of tons of pig iron have changed hands at 75s. per ton; one parcel of 1000 tons was done at 72s. 6d., and we have heard of as low as 70s. having been accepted. Welsh has retained its price from 95s. to 110s., and railway bar has been obtaining £12 per ton; the consumption continues to be very large, while prices remain lower than those of the corresponding period of last year, which may in a measure, be attributed to the absence of all transactions for delivery next year, which must materially have increased the amount of business. In Staffordshire and Wales generally, prices remain firm, and manufactured iron keeps its position in the market. It is expected the works in operation will be unable to meet the demand, and in France, with the certainty that they must shortly import largely from England or elsewhere, prices are gradually advancing; railway iron is now selling in that country for from £14 to £16 per ton, and at that figure there is not sufficient to meet the demand.

Canals into Railways.—The canals are making good preliminary bargains, in the hopes that parliament may mercifully sanction them. A special general meeting of the proprietors of the Grand Surry canal conversion has been held, to consider the propriety of selling the canal, docks, etc., to a railway company, projected to run in competition with the canal. The terms of the proposed agreement were, that the price of the canal (excepting debts, money owing and due, etc.)

be 250,000l., to be paid as under—1,000l. on sealing the agreement; 9,000l. against next February, with power on the part of the canal company, if they see fit, to extend that date till July; 140,000l. six months after the railway company shall have received their act of parliament, when they are to take possession; 50,000l. at twelve months after giving possession on the purchase money unpaid; 50,000l. two years after giving possession, interest to be charged as before, making the total purchase money of 250,000l. A Mr. Simpson was not satisfied with the conditions named, and moved, as an amendment, that 10,000l. be paid down instead of 1,000l. But the original motion was carried almost unanimously. The Andover canal has been sold to the Manchester and Southampton railway company for 30,000l.

The Highest Speed yet with Locomotives. The London Railway Record, of 22d Nov., has the following statement of an extraordinary performance on the Great Western railroad from Exeter to London, 194 miles in three hours and fourteen minutes running time, or 4 hours and 9 minutes including stops—which is about 54 miles an hour; or allowing for loss of time in getting up and slackening speed, 60 miles an hour. Higher speed for a short time has been attained, but we do not recollect of any instance where it was so long maintained.

On Monday a special train on the Great Western railway, conveying several of the directors from Exeter to London, accomplished the distance, 194 miles in 4 hours and 9 minutes, including the usual stoppages, and, in addition, to a stoppage of twenty minutes between Exeter and Bristol. This makes the time during which the train was in motion about 3 hours and 14 minutes, or about 54 miles an hour; and deducting the time lost in slackening and getting up speed, the speed was about 60 miles per hour.

The difference—Railroad and Turnpike Dividends.—The following statement, taken from the Baltimore American, of dividends declared by Turnpike and Railroad companies, is a fair illustration of the benefits of the two modes of travel and transportation.

The Baltimore and Reisterstown Turnpike Company has declared a half-yearly dividend of one per cent.

The Baltimore and Washington Turnpike Company has declared a half-yearly dividend of one per cent.

The Baltimore and York Town Turnpike Company has declared a half-yearly dividend of one per cent.

The Petersburg Railroad Company has declared a semi-annual dividend of three per cent.

A Race.—The Portsmouth Journal gives an account of the chase of a fox by the locomotive on the Eastern railroad. Poor Reynard ran like the wind for a mile or more, but was finally overtaken, and as he turned his head to escape from his pursuers, was struck by the engine wheel and crushed to death.

AMERICAN STATE WORKS AND CANALS, ETC.

STATE WORKS.		Length in miles.	Cost.	1843.		1844.		The State Canals are all 4 feet deep, and the locks are 13 to 17 feet wide, and 80 to 90 feet in length.	
				Income.	Expend.	Income.	Expend.		
N. Y.	1 Black river canal.....	35	1,524,967					The six millions paid to the canal fund from auction and salt duties are not included in the estimate of cost. The Genesee valley and the Black river canals require large sums for their completion, the interest of which additional sum is much greater than the estimated gross income of these canals when finished. The sums re- quired to complete these two canals are \$2,000,- 000 and \$600,000, making their total cost when finished \$5,553,000 and \$2,409,000; an expendi- ture incurred on estimated incomes (admitted to be liberal,) of \$39,000 and \$14,000 respectively. The total receipts from the works of Pennsyl- vania for 1843 were \$1,019,401; for 1844 \$1,- 164,326, and the cost about 30 millions. The receipts for 1844 were as follows: Canal tolls, 578,404 Railroad tolls, 252,855 Motive power, 319,500 Trucks, 13,477 of which \$585,922 is from 118 miles of railroad, and \$578,404 from 550 miles of canal. The canals of Ohio are supported by a prop- erty tax of 5¢ mills on the dollar. There are 853 miles of canal in the State, which yielded in 1843 \$471,623, and in 1844 \$515,393, the cost, 1st Jan. '43 being \$15,577,233. The increase of '44 over '43 is only \$43,770, though the year '44 has exhibited a greater increase throughout the country than ever before known. These 21 millions on sundry works yield no income whatever. The central railroad yields above 6 per cent., and is the only State work—the Erie canal ex- cepted—which is able to stand alone.	
"	2 Cayuga and Seneca.....	21	237,000	16,557	10,953	24,618	14,443		
"	3 Champlain canal.....	64	1,251,664	102,308		116,739			
"	4 Chemung.....	23	684,600	8,140	14,486	14,385	12,740		
"	5 Chenango.....	97	2,420,000	16,195	15,967	22,179	15,960		
"	6 Crooked lake.....	8	156,777	461	3,674	1,498	3,951		
"	7 Erie—enlargement of.....	363	12,648,852	1,880,316					
"	8 Genesee valley.....	120	3,739,000						
"	9 52 miles opened, cost \$1,500,000.....			12,292	13,819	19,641	15,557		
"	10 Oneida lake.....	6	50,000	225	2,239	621	1,636		
Pa.	11 Oswego.....	38	565,437	29,147	22,742	56,165	28,599		
"	12 Beaver division canal.....	25				7,381	5,386		
"	13 Delaware canal.....	60				109,278	22,870		
"	14 French creek.....	45							
"	15 Seneca river towing path.....		69,276			381			
"	16 Columbia railroad.....	82½	4,204,969			443,336	205,067		
"	17 Eastern division.....	36				179,781	138,915		
"	18 Juniata canal.....	93							
"	19 Portage railroad.....	36½	1,828,461			351,102	248,943		
"	20 Western division canal.....	105							
"	21 North branch Susquehanna canal.....	73				101,949	57,633		
"	22 West " ".....	72							
Ohio	23 Locking canal.....	56	975,130	4,757		5,286	4,139		
"	24 Miami canal.....	85	1,660,742	68,640	38,826	77,844	22,341		
"	25 Miami extension.....	105	2,856,636	8,291		12,723	14,741		
"	26 Miami northern division.....	35	322,000			unfin'd.			
"	27 Muskingum.....	91	1,627,318	23,167		29,385	15,027		
"	28 Ohio.....	334	4,600,000	322,754	123,398	343,711	113,210		
"	29 Wabash.....	91	3,028,340	35,922	6,400	49,589	12,817		
"	30 Walhonding.....	25	607,269	838	39,005	1,977	1,238		
"	31 Western road.....	31	255,015	7,254	1,782	8,747	2,929		
Ind.	32 Sundry works.....		11,000,000						
"	33 Maume canal.....								
Ill.	34 Sundry works.....		10,000,000						
Mich.	35 Central railroad.....	110	1,842,308	149,987	75,960	211,170	89,420		
"	36 Southern railroad.....	68	936,295	24,064	7,907	60,341	70,000		

CANALS.		Length in miles.	Cost.	1843.		1844.		Div. per cent.	Value of stock.	REMARKS.	
				Gross.	Nett.	Gross.	Nett.				
	Blackstone.....	25	400,000							We may, perhaps, at some future time be enabled to give the particu- lars of all these canals. The Chesapeake and Ohio canal is not yet completed to the coal mines, hence its trifling income. The enlargement of the Schuyl- kill canal has been commenced. The Morris canal was lately sold for one million, about one-fourth of of its cost.	
	Bald Eagle Navigation.....		1,000,000								
	Beaver and Sandy (part).....										
	Charleston, (S. C.).....	184	12,370,470	47,637							
	Chesapeake and Ohio.....	12	300,000								
	Conestoga.....	13									
	Delaware and Chesapeake.....	108	3,500,000	279,795	102,221	190,693	120,624				
	Schuylkill.....										
	Farmington.....										
	James river and Kenhawa.....										
	Middlesex.....	10	200,000								
	Port Deposit.....	43	2,900,000	99,623	53,337	131,491	84,455				
	Delaware and Raritan.....		300,000								
	Southwark.....	45	2,900,000								
	Tide Water.....	80	2,000,000								
	Union.....	101	1,000,000								
	Morris.....								261		
	Dismal Swamp.....										

CANADIAN CANALS.		Length in miles.	No. of locks.	Lockage in feet.	Size of locks.			Width of canal.		Estimate.	Expended to Sept. 1843.	Income.	
					Length of chamber.	Width.	Depth on mitre sill.	Bottom.	Surface.			1843.	1844.
The Welland canal.					feet.	feet.	feet.	feet.	feet.	3,948,572	2,485,572	64,658	
{ Main trunk from Port Colborne to Port Dalhousie		28	31	328	150	26 1-2	8 1-2	45	81				
{ Junction branch to Dunville		21	1	6	150	26 1-2	8 1-2	35	71				
{ Broad creek branch to Port Maitland } below,		1 1-2	1	6	200	45	9	45	85				
The St. Lawrence canal.													
{ Galops and Port Cardinal.....		2	2	7	200	45	9	50	90				
{ Rapid Plat.....		4	2	11 1-2	200	45	9	50	90	672,498	973		
{ Farren's point.....		3-4	1	3 1-2	200	45	9	50	90				
Cornwall, passing the Long Sault rapids.....		11 1-2	7	48	200	55	9	100	150	865,372	1,665,663		
Beauharnois, do. Coteau, Cedars and Cascades road		11 1-4	9	82 1-2	200	45	9	80	120	1,190,087	275,426		
Lachine, do. Lachine rapids.....		8 1-2	5	44 1-2	200	45	9	80	120	old canal	400,000	29,288	
Enlargement of do.....										1,001,333	61,439		
Total from lake Erie to the sea.....		12	57	525									
Chambly.....		66	9	74	120	24	6	36	60	200,000	440,000	1,409	

COAL COMPANIES.		Length in miles.	Cost.	1843.		1844.		Div. per cent.	Value of stock.	REMARKS.	
				Gross.	Nett.	Gross.	Nett.				
	Delaware and Hudson.....	16 108	2,800,000	930,203	196,702	10			130		
	Lehigh.....	20 72	6,000,000						31		

AMERICAN RAILROADS.															
NAMES OF RAILROADS.		Length in miles.	Cost.	Loans and debts.	Number of shares.	Paid on share.	1843. Income.		Div. per cent.	1844. Income.		Div. per cent.	1845. Income.		Div. per cent.
							Gross.	Nett.		Gross.	Nett.		Gross.	Nett.	
Maine.	1 Portland, Saco and Portsmouth.....	50	1,200,000				89,997	47,166	7	131,404	62,172	6			
N. Ham.	2 Concord.....	35	750,000									12			
Mass.	3 Boston and Maine.....	56	1,485,461				178,745	68,499	6	233,101	86,401	6			
	4 Boston and Maine extension.....	174	455,703	unfin.											
	5 Boston and Lowell.....	26	1,863,746				277,315	144,000	8	316,909	147,615	8			
	6 Boston and Providence.....	41	1,886,135	none.	18,609	100	233,388	110,823	6	282,701	156,109	6			
	7 Boston and Worcester.....	44	2,914,078				404,141	162,000	6	428,437	195,163	7			
	8 Berkshire.....	21	250,000	not stated				17,500	7	17,737					
	9 Charlestown branch.....		280,260						13	34,654	13,971	5			
	10 Eastern.....	54	2,388,631				279,563	140,595	6	337,238	227,920	8			
	11 Fitchburg.....	50	1,150,000	just op'n'd						42,759	26,835				
	12 Nashua and Lowell.....	141	380,000				84,079		8	94,588	34,944	10			
	13 New Bedford and Taunton.....	20	430,962				50,671	24,000	6	64,998	24,000	6			
	14 Northampton and Springfield.....		172,883	unfin.											
	15 Norwich and Worcester.....	66	2,290,000	900,000	16,535	100	162,336	24,871		230,674	99,464	3			
	16 Old Colony.....		87,820	unfin.											
	17 Stoughton branch.....	4	63,075	unfin.											
	18 Taunton branch.....	11	250,000					20,000	8	96,687	20,000	8			
	19 Vermont and Massachusetts.....														
	20 West Stockbridge.....	3	41,516	200		100						4			
	21 Western, (117 miles in Mass.).....	156	7,686,202	4,686,202	30,000		573,882	284,432		753,753	439,679	3			
	22 Worcester branch to Milbury.....	34	42,000												
	23 Housatonic, (10 months).....	74	1,244,123							150,000		6			
Conn.	24 Hartford and New Haven.....	38	1,100,000	100,000	10,000	100									
	25 Hartford and Springfield.....	254	600,000	400,000	2,000	100									
	26 Stonington, (year ending 1st Sept.).....	48	2,600,000	650,000	13,000	100	113,889			154,724	79,845				
N. York	27 Attica and Buffalo.....	31	336,211				45,896	7,522		73,248	48,033				
	28 Auburn and Rochester.....	78	1,796,342	200,000	14,000	100	189,693	112,000		237,667	152,007	6			
	29 Auburn and Syracuse.....	26	766,657			1334	86,291	27,334		96,738	52,544	6			
	30 Buffalo and Niagara.....	22	200,000		1,500										
	31 Erie, (446 miles).....		5,000,000												
	32 Erie, opened.....	53						48,000		126,020	59,075				
	33 Harlem.....	26	2,250,000	750,000	30,000					140,685	62,399				
	34 Hudson and Berkshire.....	31	575,613			50				35,029	1,789				
	35 Long Island.....	96	1,610,221	392,340	29,846					153,456	58,996				
	36 Mohawk and Hudson.....	17	1,317,893	400,000	10,000	100	69,948	58,780		79,804	45,763				
	37 Saratoga and Schenectady.....	22	303,658				42,242	3,000	1	34,666	8,455				
	38 Schenectady and Troy.....	204	640,800				28,043			32,646	6,365				
	39 Syracuse and Utica.....	53	1,115,897	none.	16,000	624	163,701	72,000		192,061	120,992	8			
	40 Tonawanda.....	43	727,332				76,227			11,177	75,865	5			
	41 Troy and Greenbush.....	6	180,000												
	42 Troy and Saratoga.....	25	475,801				44,325	21,000		38,502	9,971	24			
	43 Utica and Schenectady.....	78	2,168,165	none.	20,000	100	277,164	180,000	9	331,932	199,094	8			
N. Jersey	44 Camden and Amboy.....	61	3,200,000				682,832	383,880		784,191	404,956				
	45 Elizabethtown and Somerville.....	26	500,000												
	46 New Jersey.....	34	2,000,000									6			
	47 Paterson.....	16	500,000												
Penn.	48 Beaver Meadow.....	26	1,000,000												
	49 Cumberland Valley.....	46	1,250,000												
	50 Harrisburg and Lancaster.....	36	860,000	645,929									77,538	9,988	
	51 Hazleton branch.....	10	120,000												
	52 Little Schuylkill.....	29	900,000												
	53 Blossburg and Corning.....	40	600,000												
	54 Mauch Chunk.....	9	100,000												
	55 Buck Mountain.....	4	72,000												
	56 Minehill and Schuylkill Haven.....	194	396,117	25,000	7,019	50			12			12			
	57 Norristown.....	20	800,000												
	58 Philadelphia and Trenton.....	30	400,000												
	59 Pottsville and Danville.....	294	1,500,000												
	60 Reading.....	94	9,457,570	7,447,570	40,200	50				597,613	343,511				
	61 Schuylkill valley.....	10	1,000,000												
	62 Williamsport and Elmira.....	25	400,000				20,000								
	63 Philadelphia and Baltimore.....	93	4,400,000				43,043	200,000			210,000				
Delaware	64 Frenchtown.....	16	600,000												
Maryld	65 Baltimore and Ohio, (1st Oct.).....	188	7,742,410	1,153,709			575,235	279,402		658,620	346,946		738,603	374,762	3
	66 Baltimore and Washington.....	38	1,800,000				177,227	71,691		212,129	104,529		208,813	95,094	6
	67 Baltimore and Susquehanna.....	58	3,000,000												
	68 Wrightsville, York and Gettysburg.....	14	500,000												
Virginia	69 Greenville and Roanoke.....	18	284,433	37,544	2,000	100				25,368	6,074	3			
	70 Petersburg.....	63	969,880	63,000	7,690	100				122,871	72,898	6			
	71 Portsmouth and Roanoke.....	784	1,454,171												
	72 Richmond, Fredericksb'g and Potomac.....	76	800,000							185,243	85,688				
	73 Richmond and Petersburg.....	224	700,000												
	74 Winchester and Potomac.....	32	500,000												
N. Car.	75 Raleigh and Gaston.....	844	1,360,000												
	76 Wilmington and Raleigh.....	161	1,800,000									5			
S. Car.	77 South Carolina.....	136	5,671,452		34,410	75	201,464	77,456		532,871	140,196				
Georgia	78 Columbia.....	66													
	79 Central.....	1904	2,581,723	440,000	20,510	100	227,532	93,190		328,425	180,704				
	80 Georgia.....	1474	2,650,000				248,028	158,207		248,096	147,523				
	81 Montgomery and West Point.....	89	500,000	170,000		100				35,000	15,000				
ky	82 Lexington and Ohio.....	40	450,000												
	83 Little Miami.....	40	400,000												
	84 Ohio river.....	40	152,000												
	85 Cincinnati and Indianapolis.....	56	212,000	50,000			22,110	8,639	8	39,031	10,065	94	24,984	3,280	
	86 St. Lawrence.....	15						12,000		58,000	24,000				

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AMERICAN RAILROAD JOURNAL.

PUBLISHED BY D. K. MINOR, 23 Chambers street, N.Y.

Saturday, January 10, 1846.

Advance in the price of the Journal.

We desire to acknowledge our obligations to those of our subscribers, who have already, since the commencement of the new volume, given us renewed evidence of their appreciation of our labors, by sending in their subscriptions for the year 1846. We refer to the subject for the purpose of calling the attention of the subscribers generally to the *advance in the price of the Journal*—that they may act in accordance with it, in remitting for the new volume. We hope to retain all the names now on our books, and to increase the number many fold; but we desire that all should fully understand the *present terms*, that no one may hereafter feel aggrieved when the bill is presented at FIVE DOLLARS.

In remitting for the current year, it will be well to send for missing numbers of the past year.

Harlem Railroad—Monthly Statement.

The following comparative statement of receipts in 1844 and 1845, on the Harlem Railroad, shows a regular increase in every month of the year, and an aggregate increase of \$36,752, or a fraction over 26 per cent. upon last year's business.

HARLEM RAILROAD—MONTHLY RECEIPTS,

	1844.	1845.	Inc'se 1845
January,.....	6,642	10,015	3,403
February,.....	6,625	7,425	800
March,.....	7,980	10,750	2,770
April,.....	10,183	12,070	1,887
May,.....	14,883	17,777	2,899
June,.....	15,068	17,978	2,910
July,.....	17,243	20,444	3,207
August,.....	15,700	20,055	4,355
September,.....	14,377	17,558	3,181
October,.....	11,308	17,245	5,947
November,.....	10,652	13,895	3,243
December,.....	10,018	12,189	2,160
Total,.....	\$140,684	\$177,437	\$36,752

This is nearly or quite equal to the increase, upon an average of the best roads in the country; and shows what *may* be done by energy, and an effort to afford the people, who pay, a *proper and just* accommodation. A similar increase during the year 1846 will give \$223,561, which will meet the current

expenses, of repairs and working the road—say \$100,000, and give nearly six per cent. on the entire outlay of \$2,150,000 or 7 per cent. upon its loans, and 5 per cent. upon its stock—and in 1847, it will give at the same ratio of increase, \$281,686—or over 7½ per cent. upon the cost, after allowing \$116,000 for working, repairing and improving the road. This, it should be borne in mind, will be the result—even if it should not be extended beyond White Plains, with spirited and energetic management—and an evident disposition to consult the convenience and interest of the people who *desire* to use it. It will, however, be extended 28 miles, to Somers, in May next thus more than doubling its length, and of course developing the resources of a new region of country, and bringing new elements into play, and new inducements to our citizens—whose coach its cars, and whose steeds its locomotives are—to extend their jaunts still further into the country, and many more of them to avail themselves of its accommodations. We may therefore safely conclude that the income of that part of the road now in use, will be very nearly, if not quite, \$250,000 for 1846. This, however, will much depend upon the promptness and energy with which the road is managed.

It is said by many, and often truly, that short roads are not as profitable as those of greater length; yet this is not always the case, as is very forcibly illustrated by the Dublin and Kingston road, which is only six miles long, and cost £354,733, or over £59,000 per mile. This road extends along or very near the coast; and Kingston is, we believe, but a small village, a place of resort and amusement for the people of Dublin, rather than of residence, until this railroad was built. It has now become the residence of great numbers of people of small means, who can live there, and along the line of road more comfortably, and at less expense, than in the city of Dublin. This change has been brought about by judicious, energetic, and accommodating management; by starting the trains at 6 o'clock in the morning, and every half hour during the day, until 11 o'clock at night, at 1s, 8d, and 6d for 6 miles, according to the *class* of cars—thus enabling the poor people, and all classes, to avail themselves of the pleasures of an excursion, or the advantages of country residence, and still attend to business in the city. The principle adopted by this company was to “afford the greatest amount of accommodations for the lowest possible amount of compensation” that would yield a fair return upon the investment; and the result has

been entirely successful. In 1842 they divided 5 per cent., in 1843 6 per cent., and in 1844 nine per cent. upon the enormous cost of their road! So may the Harlem Road, by similar good management, divide nine, and or ten per cent. within three years—even without reaching Albany. But to accomplish this desirable object the people must be *led into the habit, by example, of* erecting small, cheap, tasty cottages, with flower and vegetable gardens all along the line, in Westchester county. Only make it *fashionable*, and there will be no difficulty in studding the whole line of road with cottages and country seats—and thus of filling the cars to overflowing—and then of course follow ample dividends.

ALBANY, however, is the great object in view. An easy, rapid and *certain* communication at all times, all seasons, with the interior of our own, and neighboring States—Connecticut and Massachusetts, via Danbury and Hartford, as well as via the Western Railroad, and even up into Vermont by the way of Pittsfield, Bennington and Rutland, to Burlington. These are the sources—in addition to the immense pleasure-travel of this city, and the rapidly increasing way-business along the line, when the road shall be completed—from whence its business is to be derived. And they are ample—abundant to make it one of the most profitable roads in the country if it shall be properly constructed and judiciously managed, with an eye single to affording the most, best, and cheapest possible accommodation to the people, consistent with a fair return upon the investment, thus making them feel that they cannot do without it, instead of allowing them to be irritated by petty annoyances, and thus raising up enemies unnecessarily. The people in the country, along the line, must also be accommodated with facilities for coming to market with their milk, vegetables, pigs and poultry; and they must have some place besides “all out-doors” in this city to stop at, and start from—a depot—a *central depot* is essential. The *present* depot is a beautiful one in a handsome day, but in a “dirty day” it needs “extensive repairs.” These things will naturally follow, however, with the extension and completion of the road to Albany; to which point *we hold the managers bound*, either to proceed with all due diligence—*absorbing, or extinguishing* by fair and amicable arrangements, the rights of their predecessors, the “New York and Albany” company—or to yield “the right of way” to those who will construct a good road, on which six hours would be quite too long time for the journey. *We are for a*

road to Albany—and we think the interior route is the one on which it ought to be made, as it will develop important resources through a region of country rich in minerals, a fertile soil and ample water power, unemployed and unappreciated, simply for lack of direct and easy access to and from market. Our motto is, "give unto those who have not, but take not from those who have an abundance." Our system of leveling is upward, by filling up the valleys, rather than building upon the hill-tops and mountains; or, in other words, construct railroads through the interior, where your field of operations has two sides to it, instead of along the margin of the best river and sound navigation in the world; where they must constantly encounter all sorts of rivalry and competition, and without the ability to create their own business, as they are sure to do when constructed through a rich agricultural or mineral region, abounding in good water-power. Local, or individual interest must, or should yield, in such matters, to the general interest. We may charge more than half the unsuccessful and ruinous projects in railroad operations in this country, to local and individual influences overruling the truth of the instruments and the judgment of the engineer.

Preservation of Timber. Kyan, Payne and M. Boucherie.

We have recently published several articles in relation to the preservation of timber; and have given the result of some exceedingly valuable experiments, where the timber has been long enough in use to give a fair, though not a thorough test.

The experiment on Kyan's plan, made on the Baltimore and Susquehanna railroad, in August, 1838, under the direction of Isaac R. Trimble, Esq., upon chestnut cross ties, which were taken up in January, 1844, after more than five years' use, and found perfectly sound, may be considered a very good test, but we hope soon to have further information in relation to this interesting experiment, as it is now more than seven years since the sills were put down, and we hope to obtain one of them entire, and directly from the road, when we next visit Baltimore; and also from Mr. Trimble the detail of the application, viz: the amount of mercury used to a given quantity of timber, the length of time during which the timber was immersed, etc.

The experiment made on the Taunton and New Bedford railroad, with Kyan's process, in 1840, of 17,000 spruce cross ties, is another very important test, as all who are familiar with spruce must be aware that when laying upon the ground, exposed to wet and dry, it is one of the least durable kinds of

timber that grows in this country; and if it can be preserved in use, for ten years only the cost of preparation will be many times saved, and the expense of repairs materially reduced. We shall also endeavor to obtain, for illustration of the effects of the process, a full sized sill from the lot put down in the Taunton road, when we visit it next spring; together with the details of preparation, for publication.

In addition to the different plans of preservation heretofore before the public, we have now another by M. Boucherie, as described in the following article, taken from a foreign paper, a description of this process will also be found in the Railroad Journal, vol. XIII, page 91—or the number for August 1, 1841—where will also be found many other interesting facts in relation to the preservation of timber, collected and arranged by Mr Jas. Herron, C. E. We should not know where to find, in the same compass, as much information on the same subject. We shall endeavor to obtain further details in relation to this new process from Major Poussin, of Paris, who will be able to give valuable information, and whose statements will be relied on.

The following letter from our esteemed correspondent in London, came to hand during our absence, or it would have appeared entire, two weeks since, when a short extract from it was published. It has lost nothing however, of its truth, force and true American feeling by the delay and we therefore give it, with the single remark that if as much true American feeling and humanity existed among the whole race of politicians—by trade—we should be in no danger of war.

"All the commercial and monetary classes look with the utmost anxiety to president Polk's message on the 1st Dec., fearing that it may contain the same style of matter as he uttered on the 4th March last, and that war may be the inevitable consequence.—War, cursed insane war! War between two kindred nations who may do each other the greatest possible injury without benefiting themselves in the slightest possible manner! The advocate for war ought to be considered the 'hostis humani generis'—a pirate—to be shot down without trial or compunction. If our people indulge in the expensive luxury of war, how can the magnificent and vastly important railway schemes between Portland and Montreal, between Boston and Montreal, between Boston and Ogdensburg, between the Hudson and lake Erie, between Philadelphia and Pitsburg, between Baltimore and the Ohio, between Richmond and the Ohio, between the South Carolina and Georgia railroads and Nashville and then on to Memphis; and many other vastly important works? I ask how are all these public works which are to confer inestimable benefits upon our vastly expanded empire to be carried on, if we are so lunatic as to have war? We are not yet prepared for war, and the only rational and efficient mode of preparing is to have all these important, and other lines of improvement made, and to have the electro-magnetic telegraph from Portland to Charleston and Savannah and on to New Orleans; and from Philadelphia to

St. Louis and on to Chicago, for the purpose of concentrating our resources and overcoming the disadvantages we labor under from having our population and our wealth scattered over such a widely expanded country. These two modes of improvement, together with one uniform (5 cents) rate of postage throughout the United States, would do more to enable us to fight efficiently than 100,000 of the best disciplined soldiers, 50 ships of the line and 100 frigates and 25 powerful war steamers. Let us postpone this cursed war for at least five years, to enable us to make the above indicated improvements, and then there will certainly be a little more reason to justify our Hotspur's in advocating this anti-christian, anti-common-sense, and anti-everything else that is rational and wise custom of murdering each other for the purpose of benefitting a few officers of the army and navy and a few contractors. Most sincerely do I hope our countrymen will have the good sense to preserve peace.—This people are decidedly peaceably inclined, if our executive will not defy and taunt them. I send you a number of railway papers and I hope all the testimony given regarding the atmospheric will find a place in your excellent paper. In our poor and mountainous country where we cannot afford the great expense of road formation so as to reduce down to gradients of less than 45 feet in the mile the atmospheric, which does not require deep cutting or tunnels, is the very thing for us. With the Frenchman's "Hallette's" valve instead of the present valve used I consider the atmospheric must carry the day and before many years entirely supersede the locomotive railway." Ever yours,

G. R.

Atmospheric Railway.

We gave, in our last, a description, with illustrations, of one plan—M. Mallet's—by a vacuum. In this number will be found a very concise description of another—Nickol's plan—in which the propelling power is condensed air, applied on the principle of the wedge. In our next we shall give a full description of Clegg and Samuda's plan, now in operation on the Croydon line, as will be seen by the annexed extract from the London Railway Chronicle, of 15th November. We can well imagine that it was an "exciting and interesting event"—an event, to witness which, we would sooner have crossed the Atlantic, than to witness any other event which has been chronicled since the trial of locomotives on the Liverpool and Manchester road in October, 1829—or 16 years ago!!! Who will tell us—and make us believe it too—what, as a mode of travelling, will outstrip the atmospheric in 1865?

We shall endeavor to give a description of the different plans, from time to time, as they reach us; but the next two or three numbers of the Journal will contain a full account of the Croydon line—five miles of which are now in use—with such engravings as will enable the reader to obtain a good idea of its construction and operation. The description is by the editor of the Railway

• And politicians who have nothing to lose but all to gain, should have been added. Ed. R. R. J.

Chronicle, who speaks from his own observation; and who appears to be in reality what he represents himself to be, "neither with the headlong advocates, nor with the wholesale opponent of the system"—but "an admirer of the application of an elegant principle," he may therefore be considered good authority, and his statements are entitled to, and will have, weight with the reader.

We intend also to give copious extracts from the minutes of evidence given before an able committee of the house of commons, which had power to send for persons, papers and records, and continued the examination from the 1st to the 11th, inclusive, of April last. During that examination, many of the ablest engineers of the kingdom, including Stephenson, Brunel, Vignoles, Cubit, Lock, and others, were on the stand; from whom many important facts in relation to railroad matters were elicited, some of which we shall be enabled to give our readers the benefit of.

For this report we are indebted to the kindness of Mr. A. B. Quimby, of Philadelphia, who recently received a copy of the report in full, with copious index.

The editor of the Chronicle thus describes what he calls A RAILWAY RACE:

"A railway race is a sufficiently exciting and interesting event; but it is rarely witnessed, and scarcely ever in perfect safety. Between a pair of well matched locomotives it would be sufficiently exciting; but between a new system, like the atmospheric, and its rival, the locomotive, the character and reputation of both systems for speed depending on the issue, a well matched contest would be of no common interest. In this case we were lucky enough to see such a race; and we believe any of our readers who leave Lonon bridge station at twenty minutes past two, and take an atmospheric ticket, may any day see the same. We were standing at the Forest Hill station, preparing to start, when it was announced that the *Dover express train* was in sight! Immediately we (the atmospheric train) made preparations to start, and were just in the act of starting from rest when the locomotive train 'wisked' past us at, probably, some 35 miles an hour. We started, but before we got into motion at any velocity the *Dover train* was a mile ahead of us, and was evidently gaining rapidly in speed. However, on we went like a whirlwind, and it soon became evident that we were gaining on our rival. Three or four minutes decided the race. We passed the express train at a rate exceeding her own by 15 or 20 miles an hour. Our velocity could not then be less than 60 miles an hour. It was easily and steadily maintained, and we were over the Brighton viaduct and considerably beyond it before the *Dover* reached it. But considerably before this time the brakes were put on, and the vacuum destroyed by the valve, to avoid danger in running in upon the workmen round the sharp curves; and when we

reached Croydon, in 6½ minutes, it was found that the journey, as a whole, had occupied more time than it has frequently been performed in.

"Our own opinion, from what we have seen, is, that on a tolerably level road, with a 15 inch pipe, a light passenger train of seven or eight carriages and a vacuum of 24 inches, 60 miles an hour may be easily maintained on an atmospheric railway. So, no doubt, it ought. That such an apparatus may be employed in many circumstances, with great public advantage, who can doubt?"

"Our opinion is also, from these data, that with an 18 inch pipe, velocities of 75 miles an hour may be obtained on the atmospheric system, and practically used for purposes of ordinary conveyance. The atmospheric system is therefore destined to play an important part in railway affairs."

The following extract from a letter dated Pittsfield, December 27, 1845, shows that western Vermont has no idea of being confined within their own borders. The people of that region are made of the right kind of material, and we can now almost see railroad cars on their way from Montreal and Burlington to New York direct.

The Pittsfield and North Adams railroad is now under contract at reasonable prices. There was considerable competition, we understand, yet everything passed off satisfactorily to all parties.

"You will perceive by the enclosed circular* that western Vermont is moving in the matter of railroads. This is an important movement, and will result in a union of the Rutland road with the western Vermont railroad, making a continuous line of railroad from New York to Montreal. The line from Burlington to Montreal may be considered as certain of construction, for there are three great lines from Boston centreing there, all in process of construction. The Rutland people have raised a million of dollars on this road, but principally (say \$800,000) for that part between Rutland and Burlington, and it is their intention to put that part or all of it under contract immediately. It will be seen at a single glance upon the map that this great line from New York to Montreal will soon be perfect. The Harlem road is now being built to a point within a few miles of the Housatonic—the Housatonic connects with the Boston and Albany road at Stockbridge—the latter in connection with the Pittsfield and North Adams, now under contract, make the line perfect to the north line of the state of Massachusetts. From Rutland, as I said before, the line is unquestion-

* The circular referred to was a call for a meeting at East Bennington, on the 2d inst., in relation to a continuation of the railroad from North Adams northward.

ably certain of being built to Montreal; and there only remains that portion between Bennington and Rutland, say 70 or 80 miles, to form the perfect line; this last portion is now beginning to attract public attention. The people of western Vermont are moving, and with such assistance as they ought to receive from those roads to be particularly benefited, the project will surely be accomplished. The Harlem, the Housatonic and the Boston and Albany road, or the shareholders of each of them are deeply interested in this matter."

Extract from a letter dated "Savannah December 25, 1845."

"I have delayed writing that I might be able to communicate the information of the final consummation of the purchase of the Monroe railroad by the company of New York and Boston capitalists. * * The road has been turned over to the new company, who are making preparations with great energy to put it in repair and have it in full operation in as short time as possible. A new charter has been granted by the legislature, changing the name to 'The Macon and Western Railroad Company,' cutting off the banking privileges, giving permission to build a branch to Columbus and West Point, fixing the capital at \$1,500,000, instead of \$1,000,000 as in the old company.

"I have the fullest confidence that the work will be pressed with vigor, and that the road will be in complete order, and fully equipped with motive power and cars for the business of the next season.

"The character of the gentleman at the head of the company, (Capt. Daniel Tyler, late president of the Norwich and Worcester railroad,) and the ability of the new stockholders to supply the means, justifies this confidence. The effect which this movement will have on the business of this city, and particularly on the Central railroad will be very beneficial; and the terms on which the purchase of the road has been made, render it a most excellent operation for the stockholders.

"With respect to a branch southwardly, the parties who have the matter in hand avow their intention to go on with it in a short time. They must, however, explore and examine the country before deciding on the proper route for the road. They have the privilege of building a branch from any part of their road to Columbus and West Point, with a provision that they shall go to Columbus, prior to the exercise of the right to go to West Point.

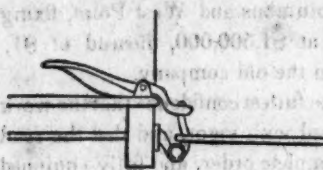
"The legislature of this state have, by a most decisive vote, refused permission to the Georgia road to build a branch from Atlanta

to West Point. The wisdom of this decision is most apparent. Georgia has expended three millions of dollars in building a road to bring the trade of the Tennessee valley into the state. South Carolina has, by her Hamburg road, availed herself for Charleston of at least half the advantages which Georgia intended for her own sea port; and if a road were built from Atlanta to West Point—which would be nothing less than an extension of the state road to Montgomery—the other half might go to Mobile. The principle of self-preservation alone, therefore, has governed her councils, and I trust she will ever adhere to her present policy.

"A good line of transportation for the travel will be afforded, as soon as the branch of the Macon and Western road is completed, via Macon and Savannah."

The following description of a plan for detaching a train of cars, or a single car from a train is taken from the Railway Chronicle of October 4th.

Having lately observed in your Journal several suggestions for the prevention of accidents, I will, with your leave, submit to your notice one, which appears to me so simple and effective, that I doubt not it will soon come into operation.



Any one looking at the sketches, will see what I propose is, to have the draw-bar so made that by means of a person's foot applied to the end of a lever, he may disconnect one carriage from another without stopping the train. Now, the guard's carriage is generally next the luggage-van (at least so in our neighborhood;) and if he should, by any means, become aware of an accident desiring instant stopping of the train without being able to communicate such to the engine driver, he has nothing else to do than put his foot on the lever and the train becomes at once detached from the engine, in time no doubt, as it has been proved in many instances, to prevent an accident that would otherwise occur.

Central Georgia Railroad.

We gave in our last the Report of R. R. Cuyler, Esq. President of this Road, and we now give the Report of L. O. Reynolds, Esq. the Chief Engineer.

From these reports we find the "Central road" in a prosperous condition; with a fair prospect of a large increase of business, at an early day, first by the completion of the Monroe, or as it is now called, the "Macon and Western" Railroad, and then by the branch

to Columbus, and West Point. The first will be in use next season; and the others within three years; when the shareholders in the central road will reap a rich return for their investments, and be well paid for their heroic perseverance under the great difficulties through which they have passed. By the time that these extensions shall be completed, the spirit of progression will have opened the way for further extensions, to Nashville in one direction, and to New Orleans, or the Mississippi River in an other—thus making the Central Railroad a part of one of the great lines from the Atlantic to the Mississippi.

ENGINEER'S OFFICE CENTRAL RAILROAD,
Savannah, Dec. 3, 1845.

To R. R. Cuyler, Esq., President:

Sir:—The period has arrived when it becomes my duty to present you with a report of the operations of the road for the year ending 30th ult., and its condition at that period. The following table exhibits the earnings of the road for the year:

DATE	No. of passenger-cars.	Passage money.	Freight and U. S. mail.	Total earnings.	Total for same period, prev. year.
Dec. 1844	1,206	\$4,576	\$30,310	\$34,886	\$31,253
Jan. 1845	1,345	4,755	26,660	31,415	29,758
Feb. "	1,041	4,649	32,137	36,787	25,704
Mar. "	1,138	5,351	33,897	39,248	25,867
April "	1,179	4,891	27,795	32,686	17,676
May "	1,402	5,679	27,639	33,312	20,092
June "	1,144	4,707	9,523	13,902	10,808
July "	1,153	4,707	18,921	23,528	12,103
Aug. "	787	3,953	12,985	16,938	18,181
Sept. "	1,132	4,770	25,409	30,180	35,410
Oct. "	1,624	6,820	35,219	42,040	50,962
Nov. "	1,460	5,580	27,941	33,523	50,603
Totals.	14,611	60,110	11,308,340	\$1,368,450	\$928,424

It will be perceived from the above table, that the earnings exceed those of the previous year by \$40,026 74.

The total number of bales of cotton transported during the year is 114,641, against 77,437 the previous year.

The shortness of the cotton crop in that part of the state which is tributary to our road, has had the effect of diminishing the receipts of the last quarter of the year. If we had transported the same amount of cotton during that period, as we did during the corresponding period of the previous year, the earnings of the road would have been increased about \$30,000—and amounted to nearly, or quite \$400,000.

We had made provision in motive power, cars, and outfit generally, for a full business, both ways, and as our upward freight has been equal to that of the last year, we have been obliged to run trains of empty cars, on our down trips, for a great portion of the last

quarter of the year. The number of passengers has decreased during the year compared with the previous year; this may be accounted for by the circumstance of our having had during the previous year, several thousands who attended religious, political and military meetings, while we have had none during the last. Our night trains have had the effect also of diminishing the number, though there is a greater proportion of through passengers, and the receipts have been increased from that source.

We have been remarkably successful in our night running; no accident of any importance to the trains has occurred; and their regularity has been fully equal to that of the day trains. The expenses have been somewhat increased, as we require three trains instead of two to be constantly in service, with an additional conductor, and engine crew.

The road throughout its whole extent, is in as good order as at any previous period; and the trains, have, during the whole of the past year, performed their trips with great regularity and freedom from accident.

The whole distance performed during the year by all the engines, is 223,241 miles.—We are entirely relieved from the difficulties arising from the breaking of axles—an accident of the kind now very rarely occurs.

The expense of maintaining and working the road during the year, has been as follows:

Maintenance of Way.—Including timber, spikes and all other materials, labor, salaries of superintendent and assistant; with all other expenses of repairs of road, bridges, wells, cisterns, turn-outs, turn-tables, etc.....	\$78,286 58
Maintenance of Machinery and Motive Power.—Including all work and materials for repairs of engines, machinery in shops, wages of runners and firemen, oil and tallow for engines, fuel and water for do., salaries of superintendent and master machinist, etc.....	54,460 49
Maintenance of Cars.—Including all materials and labor upon cars, oil and tallow for do., salary of superintendent and master carpenter.....	8,573 00
Transportation Expenses.—Including train hands, labor at depots, clerks, agents at way stations, labor at do., salary of superintendent, insurance on cotton and damage.....	42,505 25
Incidental Expenses.—Including printing, stationery and miscellaneous expenses not embraced under other heads.....	3,061 07
Total.....	\$186,886 39

We have done, in addition to the ordinary repairs of track, a large amount of work on the bridges and culverts, during the past year, and have renewed the spikes on several miles of the lower end of the road, on which the original spikes were too light.

The several additional works mentioned in my last report, as being necessary to render the road complete, have been nearly accomplished. We have erected during the past year, a new and commodious car shop, a convenient passenger house and offices at the Savannah depot—built an additional cotton yard with the necessary tracks, turn-outs and tables, at the Macon depot, added four of Baldwin's improved engines to our motive power, besides rebuilding the "Georgia" in our own shops; making our number now twenty, all of which are in working order except the

"Maton," which is dismantled. We have also embanked about one mile of the road which was built on trestle work, and intend to continue the operation on a moderate scale during the current year.

The engine house at the centre of the road is nearly completed—when finished, it will contribute much to the facility and economy of working the road; a house to shelter the passenger cars at the Savannah depot, has also been commenced; this is very necessary to protect the spare cars from the weather while not in use. Our present number of burthen cars is 180; we have on hand, and in a state of forwardness, the wheels, axles, springs, and other materials, to increase the number to 200, which, it is thought, will be sufficient for any press of business that may be expected for some time to come.

A reduction of the regular force for keeping the track in order, will be made for the approaching year, but a considerable number of hands will be required during the year on the bridges.

A reduction of expenses will be made in the machinery and motive power department, and in the car department.

Our operations have suffered less during the past autumn months by sickness than heretofore, and I doubt not that the whole line of road is improving in healthiness.

During the past year, I have made an experiment of substituting iron cross-ties for our present wooden sleepers. In renewing the sleepers as they decay, we use no other timber than cypress—this is not to be obtained near the road above the Ogeechee river, and we are obliged to transport the sleepers from the lower portions of the road, which increases the labor and expense.

I have long entertained the opinion, that a much smoother track could be attained by removing entirely the sleepers, which support the string pieces at intervals, so as to give the string pieces a continuous and uninterrupted bed of earth. I am now convinced of the correctness of this opinion. The plan is as follows:

The string pieces (6 by 12 inches,) are laid on an even well rammed surface, and in length of from 30 to 60 feet at the joinings, a bolster piece of the same scantling as the string piece and three feet long, is placed lengthwise immediately under the joint, and the string piece pinned to it. The iron rails of the ordinary T pattern, are laid along the centre of the string piece, and the track is kept in gauge by the iron tie, a piece of flat bar iron half an inch thick by two inches wide; this tie is let flatwise into the string piece flush with its upper surface under the rail, and the ends bent into the form of a hook, grasp the outside of the bottom web of the rail at the joint. The rail is confined in other respects as usual with the ordinary hook spikes. The track is filled even with the top surface of the string pieces. We have laid about 700 feet in the manner above described, on a portion of the road where the earth was springy, and it was difficult to keep the track in adjustment. It has borne the transit of the trains for several months past,

and keeps in much better order than the wooden sleepers. The following statement shows the comparative expense of a mile of road with iron cross-ties, as above described, and with wooden sleepers, for 20 years:

<i>With iron cross-ties for one mile:</i>	
352 iron bars, 18 lbs., each, at 4 cents per lb.	\$253 44
Bending the ends and preparing them, at 4 cents each	14 08
330 bolster pieces under the joinings of string pieces [6 by 12 inches, and 3 feet long] at \$7 per thousand feet B. M., to be renewed 3 times in 20 years	166 32
Putting in 352 ties	57 12
Amount	\$496 24
<i>With wooden sleepers for one mile:</i>	
660 cypress sleepers, allowing them to be left sound at the end of 20 years, will have to be renewed three times; then 1980 ties at 25 cents each	495 00
Putting in 1980 ties	471 24
Amount	\$966 24
Difference in favor of iron cross-ties in a period of 20 years, per mile	475 28
The first cost of substituting the iron for the wood is, per mile	379 00
First cost of renewing the wooden sleepers	323 00
Difference	\$57 00

You will thus perceive that in a period of 20 years, a saving of \$475 would be effected, while the additional first cost is only 57 dollars per mile. The cost of putting in the ties, both of iron and wood, is estimated from actual experiment.

I have said nothing in the above estimate, of the saving which would be made in the labor of keeping the track in adjustment; this would not be less than \$10 per mile per annum, and would swell the difference in favor of the iron ties to nearly \$700 per mile in the period of 20 years.

I think the subject worthy of the attention of the board of directors. In the arrangement of the details of the plan, in making this experiment, I am happy to acknowledge my indebtedness to the judgement and ingenuity of Mr. William M. Wadley, one of our contractors for repairs. I am, sir, very respectfully, your obedient servant.

L. O. REYNOLDS, Chief Engineer.

Right of Way.—We find the following remarks of the Pittsburg Journal, in relation to the "right of way" to the Baltimore and Ohio Railroad, in the Baltimore American. There is much truth in a few words—and it is to be hoped that the people of Philadelphia will appreciate them in time. It would be better for Pennsylvania to give a million of dollars to bring the road to Pittsburgh and to prevent its termination at Parkersburgh. The Journal says:

"It is evident that the Philadelphians are sincerely anxious and anxiously sincere now, about connecting their city with the West, by means of a Railroad. It is quite time that they should be awake to their own interests, and prepare for effectual competition with other Atlantic cities, for the trade of the West. We are sure they are in earnest now, and we rejoice that it is so, for the interest of Philadelphia cannot suffer a decline with-

out injury to Pittsburgh, and she must suffer unless soon connected with the Ohio River by Railroad.

"The continuous Railroad via Harrisburgh, will do much to restore to Philadelphia her ascendancy in trade and commerce, but that alone will not suffice. She must, to perfect her approaches to, and connexion with the West, prevent the tapping of the Ohio River by Railroad at any point so far down, as to cut off communication by the River with the Western terminus of the Philadelphia and Pittsburgh line.

"The Baltimore and Ohio Railroad must not be allowed or be driven to tap the river at Parkersburgh, but invited by liberal legislation to come to Pittsburgh, and thus leave the navigation of the river open to both lines alike. We maintain that the tapping of the river at Parkersburgh by Railroad would be disastrous to Pittsburgh, and fatal to the project of a Railroad from Philadelphia to Pittsburgh. It would be absolutely equivalent to draining the river to Parkersburgh, so far as the trade with the lower country could be affected. If the Philadelphians will add to their projected continuous Railway to Pittsburgh, advocacy of such liberal and enlightened legislation, as will induce the Baltimore and Ohio Railroad to bring their Western terminus to Pittsburgh, then all will be well."

Central Vermont Railroad.—The Burlington Free Press of the 2d inst. says:

"We announced a few days since, the commencement of this work, near Windsor. We are now pleased to announce the presence of the contractors for this end of the route, and that a gang of men are now at work between this and Montpelier. Preliminary arrangements are making for prosecuting the work with vigor, and two thousand hands will string the line at the earliest period the season will allow."

Accident on the Troy and Greenbush Railroad.—A man walking on the Railroad, near the village of Bath, was knocked down and run over, by the engine one evening last week, and killed. Name unknown. If people will thus hazard their lives, they must abide the consequences.

The following is the increase in the first twenty weeks of the present half-year in the traffic of the following lines, as compared with the same period of 1844:

Chester and Birkenhead	£2680
Eastern counties	20631
Edinburgh and Glasgow	11153
Glasgow and Greenock	1801
Glasgow, Paisley and Ayr	7992
Great Western	32749
London and Birmingham	58986
London and Brighton	15747
London and Croydon	3548
London and Southwestern	10395
Manchester and Birmingham	17043
Manchester, Bolton and Bury	1529
Manchester and Leeds	20085
Midland company	59603
North Union	3077
Preston and Wyre	4713
Sheffield and Manchester	10614
Southeastern	39810

* Including Bristol and Birmingham.

Railways in Different Countries—From the returns recently compiled by order of parliament, from documents in the possession of the board of trade and other public departments, it appears that the total amount of capital that has been expended in the construction of railways, in different countries, stood as follows at the close of 1843:—

	Miles.	Amount.	Average per mile.
Great Britain	2,089	£64,238,630	£31,048
Belgium	343	5,872,160	17,120
France	552	10,276,000	18,617
Germany	1,997	15,500,000	7,500
America	3,688	17,702,400	4,800

Total 8,650 Miles. £113,589,160 £13,131
For railways in actual progress in Great Britain an estimated capital of 74,407,520l. was raising, in order to construct 3,543 miles of line sanctioned by acts of 1844 and 1845. In France, 44,866,970l. for new lines, extending over 2,410 miles. In Germany, 18,000,000l. for 2,347½ miles; and in America, 26,995,200l. for 5,624 miles. The calculation shows, that England contributes 138,646,150l. out of the whole capital of 277,858,850l. expended and expending, or exactly 50 per cent., the length of the projected railways being 5,612½ miles, in this country, out of the grand total of 22,574½ miles or close upon 25 per cent. of their united lengths.

The Message of Gov. Pratt of Maryland. The National Intelligencer gives a synopsis of this document. "The message" it says, "is a strongly written, straight-forward paper, speaks its author's opinions out boldly, shuns no responsibility that belongs to it, and will create a decided impression on all who read it." The distinctive characteristic of the message, says the Baltimore American, is the evident determination which it evinces to urge to a successful consummation the measure of resumption on our state debt. That the legislature will support the executive in this determination, and that the people will sustain both, we do not allow ourselves to doubt. The day has never been yet, as we believe, when the people of Maryland would have failed to sanction an efficient, complete and just system of measures for maintaining the honor of the state by meeting promptly all her engagements.

Railroad from Toledo to Chicago.—A large meeting of the citizens of St. Joseph county, says the Sandusky Clarion, was held at South Bend, Indiana, on the 17th instant, at which they passed resolutions pledging themselves to take an active part in the construction of a railroad from Toledo to Chicago, but protesting against a grant of the right of way over the territory of that State, for the extension of the central railroad in Michigan, from St. Josephs round the edge of the lake to Chicago. They express their surprise (as well they may) that so many American citizens have lent their assistance and capital to the Canadian railroad, from opposite Buffalo to opposite Detroit—thus giving to a foreign power in time of war, the advantage of a road for the transportation of troops and munitions of war, built with American money, to be used against the cause and interest of those who constructed it. They al-

so resolve "that every sentiment of patriotism should give the precedence to the contemplated railroad from Toledo eastward on the south side of Lake Erie to Dunkirk."

There is no necessity, we believe, for the surprise here expressed, as the stock has been all taken in London, except a small portion reserved for Canada.

Canandaigua and Corning Railroad.—A large meeting of the friends of this road was held at Prattsburgh on the 22d ult.—

Several good speeches were made, and a resolution passed directing the central committee to employ an engineer to survey the route.—*Rochester Democrat.*

MANUFACTURE OF PATENT WIRE
Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by
JOHN A. ROEBLING, Civil Engineer,
Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition. 2v19 1y

A. & G. RALSTON & CO., NO. 4
South Front St., Philadelphia, Pa.
Have now on hand, for sale, Railroad Iron, viz: 180 tons 2½ x 4 inch Flat Punched Rails, 20 ft. long. 25 " 2½ x 4 " Flange Iron Rails. 75 " 1 x 1 " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures. 11f

TO LOCOMOTIVE AND MARINE ENGINE
Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by
MORRIS TASKER & MORRIS,
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia. 11f

KITE'S PATENT SAFETY BEAM.

MESSENGERS EDITORS.—As your Journal is devoted to the benefit of the public in general I feel desirous to communicate to you for publication the following circumstance of no inconsiderable importance, which occurred some few days since on the Philadelphia, Wilmington and Baltimore railroad.

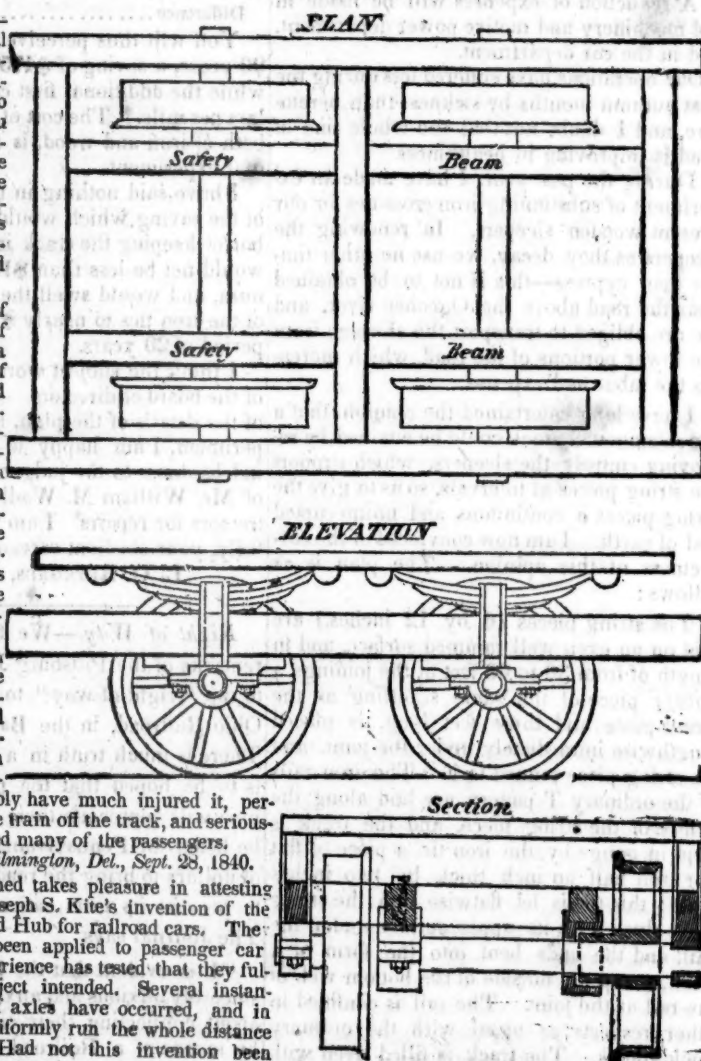
On the passage of the evening train of cars from Philadelphia to this city, an axle of our large 8 wheeled passenger car was broken, but from the particular plan of the construction, the accident was entirely unknown to any of the passengers, or, in fact, to the conductor himself, until the train, (as was supposed from some circumstances attending the case,) had passed several miles in advance of the place where the accident occurred, whereas had the car been constructed on the common plan the same kind of accident would unavoidably have much injured it, perhaps thrown the whole train off the track, and seriously injured, if not killed many of the passengers.
Wilmington, Del., Sept. 23, 1840.

The undersigned takes pleasure in attesting to the value of Mr. Joseph S. Kite's invention of the Safety Beam Axle and Hub for railroad cars. They have for some time been applied to passenger cars on this road, and experience has tested that they fully accomplish the object intended. Several instances of the fracture of axles have occurred, and in such the cars have uniformly run the whole distance with entire safety. Had not this invention been used, serious accidents must have occurred.

In short, we consider Mr. Kite's invention as completely successful in securing the safety of property and lives in railroad travelling, and should be used on all railroads in the country.

JOHN FRAZER, Agent,
GEORGE CRAIG, Superintendent,

A model of the above improvement is to be seen at the New Jersey railroad and transportation office, No. 1 Hanover st., N. York.



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BOSTON AND MAINE RAILROAD.

Upper Route. Boston to Portland via, Charlestown, Somerville, Malden, Stoneham, South Reading,

Reading, Wilmington, Ballarivale, Andover, North Andover, Bradford, Haverhill, Atkinson, Plaistow, Newtown, Kingston, East Kingston, Exeter, South Newmarket, Newmarket, Durham, Madbury, Dover, Somersworth, South Berwick, North Berwick, Wells, Kennebunk, Saco and Scarborough.

Winter Arrangement, 1845 & 6. On and after Monday, October 20th, 1845, Passenger Trains will run daily, (Sundays excepted,) as follows, viz.

Leave Boston for Portland at 7½ a.m. and 2½ p.m. Leave Boston for Great Falls at 7½ a.m., 2½ p.m. and 3½ p.m. Leave Boston for Haverhill at 7½ a.m., 2½, 3½ and 5 p.m. Leave Portland for Boston at 7½ a.m., and 3 p.m. Leave Great Falls for Boston at 6½ a.m., 9½ a.m. and 1½ p.m. Leave Haverhill for Boston at 6½, 7½, 11 a.m., and 6½ p.m.

Special Train.—A special train will leave Boston for Andover at 1½ a.m., and Andover for Boston at 3½ p.m.

The Depot in Boston is on Haymarket Square. Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

CHAS. MINOT,

October 20, 1845. 43 ly Super't.

SPRING STEEL FOR LOCOMOTIVES. Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1½ to 6 inches in width, and of any thickness required; large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,

ja5a3. Albany Iron and Nail Works, Troy, N. Y.

TO IRON MANUFACTURERS. THE Subscribers, as Agents of Mr. Geo. Crane, of Wales, having obtained a patent in the United States for his process of smelting Iron Ore with Anthracite coal, and holding an assignment of the patent obtained by the late R. v. F. W. Geissenhainer, are prepared to grant licenses for the manufacture of Iron according to Mr. Crane's principle.

A. & G. RALSTON & CO.,

ja45 No. 4 South Front st., Philadelphia, Pa.

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Paterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,

ja45 Paterson, N. J., or 60 Wall street, N. York.

FOR SALE AT A SACRIFICE—A LOCOMOTIVE Engine, 4 wheels and Tender. Cylinders 10 in. dia., Stroke 16 in., Cylinders inside of smoke box. Weight of engine, with wood and water, about 9 tons. This engine and tender are new, and of the best materials and workmanship. If required, would be altered to a 6 wheeled engine.

Also, 1 20-horse High Pressure Steam Engine. 2 8-horse

1 Upright Hydraulic Press.

All of which will be sold low, on application to

T. W. & R. C. SMITH.

Founders and Machinists,

May 1847 Alexandria, D. C.

GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.

This Road in connection with the South Carolina Railroad and

the Western and Atlantic Road now forms a continuous line of Railroad of 360 miles from Charleston to Cartersville, two miles west of the Etowa River in Cass County.

Rates of Freight, and Passage from Augusta to Cartersville.

On Boxes of Hats, Bonnets, and Furniture

per foot.....15 cts.

" Dry goods, shoes, saddlery etc., per 100 lbs. 65 "

" Sugar, coffee, iron, hardware, etc. " 70 "

" Flour, bacon, mill machinery etc. " 33½ "

" Molasses, per hogshead \$9; salt per bus. .22 "

Passengers \$9 50; children under 12 years of age and servants, half price.

Passengers to Atlanta, head of Ga. Railroad, \$7. German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Augusta.

J. EDGAR THOMPSON,

Ch. Eng. and Gen. Agent.

Augusta, Oct. 21 1845.

*44 ly

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee.

G. A. NICOLLS,

Reading, Pa.

ja45

GEORGE VAIL & CO., SPEEDWELL IRON

Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1½ in. to 24 in thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wro't. Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wro't. Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions.

ja45ly

TO RAILROAD COMPANIES AND MANUFACTURERS of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,

ja45 N. E. cor. 19th and Market sts., Philad., Pa.

NORWICH AND WORCESTER RAILROAD.

On and after May 22, 1845, Trains will leave as follows, viz:—

Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4½ p.m. Leave Worcester, at 10 a.m., and 4½ p.m.

The morning train from Norwich, and the morning and evening trains from Worcester, connect with the Boston, Western, and Hartford and Springfield railroads.

New York Train, via Steamboat. Leaves Norwich for Worcester and Boston, every morning except Monday, upon the arrival of the boat from New York, about 2 a.m. Leaves Worcester for Norwich and New York, at 5½ p.m., daily, except Sunday.

New York Train, via Long Island Railroad.—Leaves Norwich about 3 p.m., for Worcester and Boston, daily, except Sunday. Leaves Worcester for Norwich and New York, at 7½ a.m., daily, except Sunday, and arrives in Norwich at 9½.

Freight Trains. Daily, except Sunday.

Fares are less when paid for Tickets, than when paid in the cars.

EMERSON FOOTE,

Superintendent.

32 ly

LAWRENCE'S ROSENDALE HYDRAULIC CEMENT. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floors and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by

JOHN W. LAWRENCE,

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office.

32 ly

WESTERN AND ATLANTIC RAILROAD. The Western and Atlantic Railroad is now in operation to Marietta, and will be opened to Cartersville, in Cass county, on the 20th of October—and to Coosa Depot, (formerly known as Borough's,) on the 20th of November.

The passenger train will continue, as at present to connect daily (Sundays excepted) with the train from Augusta, and the stage from Griffin.

CHAS. F. M. GARNETT,

Chief Engineer.

43

LITTLE MIAMI RAILROAD.—DIS-

tance 65½ Miles. Fare, \$1 50. From 1st

November to 1st March Passenger

Trains leave Cincinnati for

Xenia at 11 o'clock, A.M.

Returning, leaves Xenia at 8½ o'clock, A.M.

Freight Trains run daily, Sundays excepted.

At Xenia, Passenger Trains connect with daily lines of stages to Columbus, Wheeling, Cleveland and Sandusky city.

W. H. CLEMENT,

Supt. and Engineer.

ly1

RAILROAD IRON.—THE "MONTGOMERY"

Iron Company, Danville, Pa., is prepared

to execute orders for the heavy Rail Bars of any

pattern now in use, in this country or in Europe,

and equal in every respect in point of quality. Apply to

MURDOCK, LEAVITT & CO.,

Agents.

Corner of Cedar and Greenwich Sts.

43 ly

C. J. F. BINNEY,

GENERAL COMMISSION MERCHANT

and Agent for Coal, and also Iron Manufactures, etc.

No. 1 CITY WHARF, Boston.

Advances made on Consignments.

Refer to Amos Binney, Boston.

Grant & Stone,

Brown, Earl & Erringer,

Weld & Seaver, Baltimore.

December 8, 1845.

1m 50

BACK VOLUMES OF THE RAILROAD

JOURNAL for sale at the office, No. 23

Chambers street.

NEW YORK AND HARLEM RAILROAD COMPANY.—Winter Arrangement.

On and after November 3d, 1845, the cars will run as follows:

Leave City Hall for Yorkville, Harlem, Morrisiana, and Williams' Bridge,

7 30 A.M. This train leaves 27th st.

7 30 " Does not stop this side of Harlem.

10 30 " Does not stop this side of Harlem.

11 30 " Does not stop this side of Harlem.

1 P.M. Does not stop this side of Harlem.

2 30 " Does not stop this side of Harlem.

3 30 " Does not stop this side of Harlem.

4 30 " Does not stop this side of Harlem.

Leave White Plains for City Hall—8:10, 11:10 a.m., and 1:45, 4:10 p.m.

Leave Tuckahoe for City Hall—8:20, 11:20 a.m., and 1:55, 4:20 p.m.

Leave Williams' Bridge for City Hall—8:45, 11:45 a.m., and 12:45, 2:15, 3:45, 4:45, and 5:45 p.m.

Leave Morrisiana for City Hall—8, and 9:10 a.m., and 12:10, 1:10, 2:40, 4:10, 5:10, and 6:10 p.m.

The freight train will leave City Hall at 12:45 p.m. and leave White Plains at 11:10 a.m. All freight must be at the City Hall between the hours of 10:30 a.m. and 12:30 p.m. The White Plain trains will stop, after leaving the City Hall, only at the corner of Broome street and the Bowery, Vauxhall Garden and 27th street.

An extra car will precede each train, 10 minutes before the time of starting from the City Hall, and will take up passengers along the line.

The City Hall and 27th street line will run every 6 minutes from 7:30 a.m. to 8 p.m.

The City Hall and 27th street night line will run every 20 minutes from 8 to 12 o'clock.

On Sundays the trains will be regulated according to the state of the weather. 1y 46

THE LONDON RAILWAY RECORD, Edited by Mr. JOHN ROBERTSON, A. M., (connected from the commencement with the Weekly Railway press of England.)

The *Railway Record* is acknowledged to be the leading English Railway Journal, and is published twice a week in London, namely on Wednesday and Saturday. It contains copious and correct reports (by special reporters) of all railway meetings in the United Kingdom; ample Share Lists and Traffic Tables, showing the length, cost, capital and selling prices in the principal markets, with Editorial articles on the leading Railway topics of the day. The *Railway Record* contains also, a complete resume of French, Belgian and other foreign Railway affairs.

Subscriptions 13s. per quarter, to be transmitted in advance to Messrs. Dawson and Sons, Ca^o st. London. Office 153 Fleet street, London. 46

BOSTON COURIER, DAILY, SEMI-Weekly and Weekly.

The *Daily* edition of the *Courier*, presents to merchants and others, an extensive medium of advertising. The circulation of the *Semi-Weekly* *Courier* (published on Mondays and Thursdays) is believed to be more extensive than that of any other similar Boston Newspaper. This publication embraces all the reading matter of the *Daily*, the Foreign and Domestic Markets, Review of the Boston Market, Prices current, and Ship News, prepared with great accuracy. The *Weekly* *Courier* contains as much of the matter of the *Daily* as can be crowded into a sheet of the same size, without ship news, prices current or advertisements.

Our extions to obtain and publish authentic information on all topics proper for the columns of a newspaper,—the state of trade, the prices of merchandise, the current news of the day, and the political movements in the various sections of the country—will not be abated. The marine department of the *Courier* has been inferior to none in copiousness or accuracy of detail, and it will be our endeavor maintain its reputation in this respect.

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WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5¹/₂ P. M. from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare \$1.60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13 1y

CENTRAL RAILROAD—FROM SAVANNAH to Macon. Distance 190 miles.

This Road is open for the trans-

portation of Passengers and

Freight. Rates of Passage, \$8 00. Freight—

On weight goods generally... 50 cts. per hundred.

On measurement goods..... 13 cts. per cubic ft.

On brls. wet (except molasses

and oil)..... \$1 50 per barrel.

On brls. dry (except lime).... 80 cts. per barrel.

On iron in pigs or bars, cast-

ings for mills, and unboxed

machinery..... 40 cts. per hundred.

On hhds. and pipes of liquor,

not over 120 gallons..... \$5 00 per hhd.

On molasses and oil..... \$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded

free of commission. THOMAS PURSE,

40 Gen'l. Supt. Transportation.

LEXINGTON AND OHIO RAILROAD.

Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m.

Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare \$1.25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and 9 a.m. from Frankfort, other hours as above. 35 1y

KEARNEY FIRE BRICK. F. W.

BRINLEY, Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms,

4 mos. from delivery of brick on board. Refer to

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The Subscribers are ready to execute orders for the above, or to contract therefor, at a fixed price, delivered in the United States.

DAVIS, BROOKS & CO.,

30 Wall st., N. York.

BOSTON AND PROVIDENCE RAILROAD. Passenger Notice. Winter Arrangement.

ment. On and after Mon-

day, Nov. 3, the Passenger

Trains will run as follows:

For New York—night line, via Stonington—

Leaves Boston every day, but Sunday, at 4¹/₂ p.m.

Accommodation trains, leave Boston at 8 a.m. and

3¹/₂ p.m., and Providence at 8 a.m. and 3¹/₂ p.m.

Dedham trains, leave Boston at 9 a.m. 3, 5¹/₂

and 10 p.m. Leave Dedham at 8 and 10¹/₂ a.m.,

and 4¹/₂ and 7 p.m.

Stoughton trains, leave Boston at 12 m. and

4 p.m. Leave Stoughton at 8:20 a.m. and 2¹/₂ p.m.

All baggage at the risk of the owners thereof.

N.B. The last train to and from Boston and Ded-

ham, will be omitted in case of a severe snow

storm. W. RAYMOND LEE, Supt. 31 1y

BRANCH RAILROAD and STAGES CON-

necting with the Boston and Providence Railroad.

Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I.

via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I.

Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

NEW YORK AND ERIE RAILROAD

LINE. For Middletown, Goshen, and intermediate places. Two daily

lines each way, as follows:

For passengers, the new, and commodious steamboat St. Nicholas, Capt. Alex. H. Shultz, will leave the foot of Duane street daily, [Sundays excepted,] at 7¹/₂ o'clock, A.M., and 5 o'clock, P.M., through in five

hours. Returning, the cars will leave Middletown at 6 A.M., and 4¹/₂ P.M. For further particulars

inquire of J. Van Rensselaer, Agent, corner of Duane and West streets.

H. C. SEYMOUR, Superintendent.

Stages run from Middletown daily, in connection with the afternoon line, to Bloomingburg, Wurtsboro, Monticello, Mt. Pleasant, Binghamton, Owego, Port Jervis, Honesdale, Carbondale, etc.

On Monday, Wednesday, and Friday, to Dundaff, Montrose, Friendsville, Lenox, Brooklyn, etc. 31 1y

BALTIMORE AND SUSQUEHANNA

Railroad. The Passenger train runs daily except Sunday, as follows:

Leaves Baltimore at 9 a.m., and

arrives at 6¹/₂ p.m. Arrives at York at 12¹/₂ p.m.,

and leaves for Columbia at 1¹/₂ p.m. Leaves Col-

umbia at 2 p.m., and leaves York for Baltimore at

3 p.m. Fare to York \$2. Wrightsville \$2 50, and

Columbia \$2 62¹/₂. The train connects at York

with stages for Harrisburg, Gettysburg, Chambers-

burg, Pittsburg and York Springs.

Fare to Pittsburg. The company is authorized by the proprietors of Passenger lines on the Pennsylvania improvements, to receive the fare for the whole distance from Baltimore to Pittsburg. Balt-

more to Pittsburg.—Fare through, \$9 and \$10.

Afternoon train. This train leaves the ticket office daily, Sundays excepted, at 3¹/₂ p.m. for Cockeysville, Parkton, Green Springs, Owings' Mills, etc.

Returning, leaves Parkton at 6 and Cockeysville and Owings' Mills at 7, arriving in Baltimore at 9 o'clock a.m.

Tickets for the round trip to and from any point can be procured from the agents at the ticket offices or from the conductors in the cars. The fare when tickets are thus procured, will be 25 per cent. less, and the tickets will be good for the same and following day any passenger train.

D. C. H. BORDLEY, Supt.

31 1y Ticket Office, 63 North st.

DAVIS, BROOKS & CO., 30 WALL ST.

Have now on hand and for sale,

200 tons 2¹/₂ x 1¹/₂ inch Flat punched Rails, Bars

18 feet each.

100 tons Heavy Edge Rails, 90 tons per mile.

30 tons 2¹/₂ x 1¹/₂ inch Flat Rails.

Also—A STEAM PILE DRIVER, built by

"Dunham & Co." which has never been used, and

cost originally \$5000. 30 2m